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Examining the Relationship between Cognitive Selection Criteria for Admission and Noncognitive Performance Outcomes in a Professional Graduate Degree Program

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Examining the Relationship between Cognitive Selection Criteria for Admission and Noncognitive Performance Outcomes in a Professional Graduate Degree Program

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Abstract

The admission processes in higher education have been the topic of considerable discussion and study at all levels of the institution from undergraduate to graduate and professional education. This study focused on graduate students who completed their master's degree in Counseling and School Counseling from 2010 to 2018. Students completed their degree fully online and from a distance. The goal was to determine if admission criteria were predictive of end of program clinical fieldwork evaluations. Independent variables looked at were Undergraduate GPA (UGPA); GRE: (V)erbal, (Q)uantitative, and (W)riting; First Semester Graduate GPA (GPA1), and Cumulative Graduate GPA (GPAEP). End of program clinical evaluations were used as the dependent variable and represented site supervisor scores on two constructs—Professional Skills and Counseling Skills from three fieldwork courses: Practicum (n=220), Internship I (n=220), and Internship II (n=214). Multiple Linear Regression showed that UGPA, GREQ, GREV, GREW, GPA1, and GPAEP did not significantly predict clinical scores in Professional Skills or Counseling Skills for Practicum, Internship I, or Internship II. Traditional academic admissions criteria and academic measures during the program do not predict clinical performance. These results indicate that the academic strength of a student on admission may not predict their performance in their clinical courses, and traditional academic admission criteria may not be the best criteria to use in the selection process for students with a clinical performance component. Reliance on alternative admission criteria such as recommendations and interviews may be better predictors of a student's clinical performance.

Key words: selection, academic admission criteria, clinical evaluations, graduate education, online education, virtual education, clinical outcomes, higher education

Dedication

I would like to dedicate this dissertation to my husband Marc who believed and supported me throughout this entire process. To my children, RosaMarie and Anthony, who often repeated the words they had heard me say to them throughout their lives, “You can do it.” And to my sister, Judy, cousin, Diane and nieces who always expressed how proud they were of me. And of course, my very dearest and closest friends who never once doubted my ability to complete this dissertation and earn the PhD.

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Chapter 1: Introduction

Admission processes in higher education have been the topic of considerable discussion and study. Concerns with admission policies range from health crises to diversity concerns to scandals (Jaschik, 2020). The topic is widely researched, as it impacts the reputation and financial well-being of the institution, the faculty who are charged with educating those admitted, and the individual applicant (Posselt, 2016). The admission process has been critically reviewed by institutions, groups and individuals. It is a personal and emotional process for those applying and has become the subject of lawsuits brought by those who believe they have been unfairly treated by the institution (Hartocollis, 2018; Jaschik, 2020).

One goal of U.S. higher education institutions is to identify and select the applicants they expect will be academically successful, differentiating these applicants from the ones who will not. Differentiating applicants from each other is based upon the application process and the application materials they present to admission committees (Caskey et al., 2001; Desjardins, 2006; Kuncel et al., 2007). Admission selection still remains subjective and is mostly based upon the prior academic history and performance of the individual. The best and most equitable approaches and policies for admission continue to be of interest to those responsible for defining and developing these policies.

Typical sets of criteria used to evaluate and identify applicants for selection include a standardized measure of cognition and a view of prior academic achievement. Undergraduate admission criteria encompass ACT/SAT scores and high school GPA. Graduate and professional school metrics include a Graduate Record Exam (GRE) or another form of a standardized test score, and an undergraduate GPA (UGPA) (Scott & Zerwic, 2015). Questions around equity in admissions have been raised by many researchers who look at admission criteria in higher education (Posselt, 2016).

Efforts to make admission more equitable began as early as 1954 with the Brown v. Board of Education decision to eliminate discrimination in schools (Wright & Garces, 2018). A recent lawsuit brought against Harvard University for discriminatory admission practices, especially against Asian students (Harvard University, n.d.; Lockhart, 2018) has brought admissions policies to the forefront of the public spotlight. This is true as parents pay extraordinary amounts of money and go to extremes to ensure their children are admitted to the institution of their choice. Yet, college remains a good value for future career and economic opportunity for those who attend and graduate (Jaschik, 2019). Thus, the continuation of the study of admissions will add to the understanding for those in higher education who are developing policies to meet the needs of today's student and society. Current research has not considered if there is a relationship between established academic admission criteria policies and performance outcome measures. This research adds to the greater understanding of admission by examining whether academic measures used to identify prospective students in online counseling and school counseling programs are, in fact, related to their performance as counselors, an integral part of their overall training.

Recently, institutions selecting students for admission to training programs in professions such as psychology, medicine, social work, and counseling are reevaluating their use of long-standing admission criteria (Cleland, 2018; Clinedinst & Patel, 2018; Maddox & Perry, 2018). Researchers have begun to consider the consequences of their decisions around admission and propose expanding to include other stakeholders in the decision process. The objective is to increase collaboration and dialogue among colleagues to develop and create admissions policies that align with the objectives of the profession (Cleland, 2018). One aspect of educational training that differentiates these professions from other graduate degrees is the integration of a

didactic learning component with a performance-based output criterion (Sternberg, 1997, 2010; Sternberg & Sternberg, 2017; Vliek et al., 2015). Little research literature exists where criteria used for admission to master's and professional degree programs is studied in conjunction with performance outcome measurements.

Delivery of online graduate programs is becoming increasingly accepted and popular. They offer flexibility to the student, the opportunity to complete a degree without the need to be physically present, and continued access to educational attainment all done remotely (Rath et al., 2019). More colleges are offering online degrees and more students are enrolling in graduate study as online students. The sample population for this study was online students who completed their master's degree fully from a distance.

In 2016, more than one-third of total master's students or 1.1 million students participated in distance education. Twenty-eight percent of total master's students or 819,000 students took distance education courses exclusively (U.S. Department of Education, National Center for Education Statistics, forthcoming). Distance education enrollments have shown a steady and consistent increase from 2002 until 2012 (Seaman et al., 2018). About 26% of all college students took at least one distance course in 2012; almost 30% took one in 2015. The student who enrolls in online or distance education courses or programs is provided with the opportunity of not being limited to a program or institution based upon geographic location. Their opportunities to select an institution that might meet their educational goals is broadened. From an institutional perspective, the online delivery allows for variability in the geographic location of student body, age, ethnicity, gender, and an increase in enrollment opportunity (Rizvi et al., 2019). The absence of physical boundaries for recruitment and admission objectives can

also have a positive effect on the cultural diversity of the student candidates, allowing for a richer learning environment (Bozkurt & Aydın, 2018).

Alternative Delivery Methods

The previous sections described the focus of this research and the rationale for considering performance outcomes as a measure of academic success. This section explains why an alternative method of delivering education is an important consideration in this research. First, the alternative delivery method of online learning is necessary because the sample population for this study completed their professional degrees as online students. Second, a limited number of previous studies looked at the academic outcomes of online students who completed their master's degree completely online.

While the acceptance of this alternative delivery method is commonly viewed as a positive experience for students and institutions of higher education alike (Allen & Seaman, 2013), the majority of students who attended college were enrolled in traditional face-to-face classroom environments (McPherson & Bacow, 2015). On average and based upon all types of institutions, total students enrolled in traditional face-to-face courses accounted for approximately 75% of all enrollments. Student enrollment in completely online courses accounts for approximately 11% of all enrollments (Goodman et al., 2016).

The overall characteristics of students enrolled in both delivery methods at both the undergraduate and graduate levels are similar in terms of race and gender (Goodman et al., 2016). However, there are some specific characteristics and life experiences that differentiate the two groups of students. The online student, identified in general terms, is an adult (Park & Choi, 2009), older (Richards, 2012), and generally over age 24 (Jinkens, 2009), with family responsibilities and personal commitments at home. They live a distance from college (Baptista, 2011; Mills et al., 2009; Park & Choi, 2009), and can be single parents (Baptista, 2011) with

hectic work schedules (Mills et al., 2009) and competing family roles (Baptista, 2011; Dzubinski, Hentz, Davis, & Nicolaides, 2012). They are mature, with more extensive life experiences and different educational values and educational goals, display a strong academic self-concept, have good communication skills and an internal locus of control, and are intrinsically motivated (Wyatt, 2011; Yukselturk & Top, 2013). An overriding motivation for those who selected an online program was the flexibility of delivery, convenience, and cost advantages of these programs (Goodman et al., 2016).

While studies have considered the online student, few studies looked at the population of graduate students who completed an entire degree online. Research shows an increased interest to determine if online learning outcomes compare to on-ground learning. Yet studies that compared these delivery methods were essentially based on single course comparisons (Cummings et al., 2013; Hickey et al., 2015; Lyke & Frank, 2012; Renfro-Michel et al., 2010; Watson, 2012). Another shortcoming of current research is a lack of studies on those graduate degrees that encompass applying theoretical knowledge to human interaction as part of their training (Watson, 2012).

Admission Criteria

Research generally supports the association between prior academic success and future student academic success. However, cognitive measures alone may be limiting as a selection criterion for those areas of study where a behavioral component of the training is considered as important as the academic training. Studies by Kuncel, Hezlett, and Ones (2001, 2004), Kuncel and Hezlett (2007), and Kuncel, Kochevar, and Ones (2014) examined the relationship between an applicant's standardized exam and undergraduate GPA and their academic performance in graduate school. These measures were found to have a positive correlation with graduate academic output performance measures, including first year grade point average and academic

success measured by final GPA. However, these authors cautioned that while standardized tests such as the GRE may potentially identify good future graduate performance, these exams may not necessarily gauge future career success. Questions then arise as to whether admission criteria may potentially overlook applicants who appeared unqualified on paper, but who may have the potential to be successful in their careers (McClelland, 1973; Michel et al., 2019; Sternberg, 2010).

Policies on Admission

Policies to ensure a fair and equitable process of admission have been reassessed at all levels of the institution. Several undergraduate institutions have begun to apply a test-optional policy in their admissions' policies (Belasco et al., 2015; Sternberg et al., 2012). Proponents of the test-optional approach have advocated for a more accessible and diverse student applicant pool. They suggest that the elimination of a standardized test requirement would open up access to higher education to more people (Mattern & Allen, 2016). Although this admission policy was intended to bring about positive changes in the landscape of institutions of higher education, it has not shown to be as effective as planned. The test-optional policies did not expand access for low-income and minority students. These policies have had little effect in increasing diversity, and instead resulted in institutions becoming more selective because of the larger applicant pool from which to select their students (Belasco et al., 2015).

A more inclusive approach to admissions has been to look at applicants holistically. The holistic approach to admissions would look at a broader range of applicant characteristics beyond cognitive measures alone. In particular, medical schools, where training includes both a strong cognitive component along with a strong clinical component have led the way in questioning whether their heavily weighted reliance on standardized testing in admission is as effective as perceived (Libbrecht et al., 2014; Patterson et al., 2016; Sesate et al., 2017). A call for more

research on the relationship between admissions and other equally important behavioral components is called for by these authors. Researchers Libbrecht, Lievens, Carette, and Côté (2014) and Sesate et al. (2017) recognize through their research with medical school admissions the importance of multidimensional training and intellectual and intrapersonal qualities needed for those in the medical profession. These authors suggest that a heavy reliance on academic predictors alone in admissions can reduce the opportunity to identify physicians who would also be sensitive and effective communicators, a skill identified as important in this profession. These qualities along with other non-academic professional characteristics such as interpersonal skills, professionalism, and ethical behavior are not measured through standardized test scores. The issue of structural racism has also been raised for admission to professional schools because of their reliance on standardized testing. The reliance on standardized test scores where those students from underrepresented populations typically have lower average scores may result in fewer students from underrepresented populations being admitted. These differences in scores are not due to intellect or aptitude but to the differences in opportunity available to each group (Lucey & Saguil, 2020). The calls for changes in admission continue, but research on adaptation of different policies have followed suit (Capers et al., 2018).

Academic Success

Academic success has been broadly defined in research as the cognitive and measurable outcomes of a student's performance. These include quantifiable measures of academic proficiency such as final and term grades and overall GPA (Astin & Antonio, 2012; Choi, 2005; Kuncel et al., 2001, 2004). While research supports an overall positive relationship between admission factors and academic proficiency in graduate school, especially first year grades (Kuncel & Hezlett, 2007; Kuncel et al., 2001; Kuncel et al., 2014; York et al., 2015), little

research has considered the relationship between admission criteria with non-cognitive performance outcomes.

Professional Competency

A competency is an interactive cluster of integrated knowledge, concepts, skills, and abilities including personal behaviors and strategies that enable a person to execute a professional activity. They involve the whole person and are believed to be teachable, measurable, and generally developed by experts in the field (Astin, 1991; Astin & Antonio, 2012; Kaslow et al., 2012).

Becoming a practitioner in professional fields including medicine, law, education, social work, nursing, and counseling involves the acquisition of the professional skills and knowledge, as well as an understanding of and familiarization with the situated practices that are considered professional practice among its members (Fellenz, 2016). The standards for professional competency are set by those overseeing the profession and are regulated by members of the profession. The self-regulation of professional oversight decides appropriate admissions policies, standards for behavior, and discipline policies for incompetent or unethical members of their profession (Bernard & Goodyear, 2009; Stevens et al., 2017).

Formal training of a professional and practitioner is done through a graduate education program (Astin & Antonio, 2012; Kaslow, 2004; Kaslow et al., 2012). Students in a professional education training degree program must be able to show their competency in the profession by an evaluative assessment of their field work. They should display the ability to make suitable judgments and exhibit an acceptable level of professional behaviors (Evetts, 2014; Gherardi & Perrotta, 2014). A graduate degree in a professional training program is the representation and assurance by those educating the student that the person is adequately trained and prepared to

meet the demands of their profession (Falender & Shafranske, 2004, 2017; Kaslow et al., 2007; Stevens et al., 2017; Wu et al., 2015).

The tangible results of an academic training program identified by grades with a measurement of professional performance are important gauges of academic success in professional professions. Students in their final semesters of a professional program in counseling and school counseling are required to provide adequate assessment of their clinical competency. Therefore, this study seeks to fill the gap in research by studying the relationship between traditional admission criteria and clinical outcomes.

Professional Master's Degrees

A professionally oriented master's degree differs from a graduate degree without a clinical component in that it prepares students to work in a professional field. This degree stands in contrast to a baccalaureate degree, which does not provide a sufficient amount of training and background to work in the profession. A professional master's degree has a specific set of required courses including an internship in a supervised work environment. One of the goals of a professional master's degree such as an M.Ed. in education, an M.S.W. in social work, or an M.A. in counseling is to train students, and foster the mastery of a specific professional skill set ("Task Force Report," 2007; Evetts, 2014).

Those pursuing master's degrees in counseling and school counseling are trained to be professionals in the helping professions (Kottler & Shepard, 2014). The helping professions are relationship-based with the intent to empower individuals, families, and groups to accomplish mental health, wellness, and education (American Counseling Association, 2016). The school counselor applies academic achievement strategies, manages emotions, works with students on their interpersonal skills, and plans for postsecondary opportunities and advisement on future career and educational goals (American School Counseling Association, n.d.). Their role then

encompasses a wide array of duties, services, and responsibilities for all students under their supervision. The nature of this professional training requires an evaluation of the student's success both cognitively and non-cognitively (Curry & Docherty, 2017; McLaughlin et al., 2015).

The United States is seeing an increased need for educating and training counselors and school counselors. The United States Bureau of Labor Statistics (2018) estimated a 23% projected growth in employment from 2016 to 2026 for counselors, and a 13% growth in employment for school counselors during the same time period. This is identified as a faster than average growth percentage than for all other occupations. The onset of COVID-19 has magnified the need for mental health professionals to help people as they struggle with the consequences of this pandemic. The Center for Disease Control has dedicated a website for people across the United States showing resources for mental health hotlines (Center for Disease Control, 2020). Similarly, the American Counseling Association has outlined benefits of telehealth counseling, working with clients remotely, and those trained as school counselors identifying the need of those in the counseling profession to provide their help and support (American Counseling Association, 2020).

In light of the continued interest in online delivery methods and a positive job outlook for both counselors and school counselors, this research hoped to contribute to the validity of the current admission requirements and processes used in an online counseling program at a mid-sized urban Catholic University. The purpose of this study was to determine to what extent undergraduate GPA (UGPA), first semester GPA (GPA1), graduate program final GPA (GPAEP), and Graduate Record Exam scores—particularly GRE-Quantitative (GREQ), GRE-Verbal (GREV), and GRE-Writing (GREW) predict the academic success of graduate students in

a counseling and school counseling degree program. Academic success is evaluated by their end of clinical course site evaluations. End of program clinical evaluations for students in their clinical sequence including Practicum (the first course in the clinical sequence), Internship I (the second course in the clinical sequence), and Internship II (the final course in the clinical sequence for students enrolled in the master's degree in Counseling and School Counseling) were used to measure performance outcomes.

A brief examination of an online search of admission requirements of about 20 schools with online degree programs in counseling and school counseling was done to determine the admission criteria they utilized. Many campus-based only programs require a standardized test as admission criteria while the larger, more established online schools have long removed this requirement for admission. These include Capella University, Walden University, and Liberty University. Newly added online programs offered by institutions with strong name recognition nationally and internationally such as New York University and Columbia University have started to offer degrees in counseling and school counseling online and do not require a standardized test with admission. The trend toward a no-testing policy for undergraduate institutions now continues to graduate schools.

Overall, I was interested in knowing more about academic measures of admission and their likelihood of identifying those students who succeeded in programs that may require a different skill set than those measured through these admission criteria. This research sought to add to the body of knowledge that exists to further clarify whether current admission standards accurately gauge academic outcomes for graduate students. It sought to contribute to the current body of literature by studying whether admission criteria are valid in identifying students who persist through program completion in a professional training program in counseling.

Research Questions

Major Research Question

What is the likelihood that selection criteria for admission to a competency-based degree program predict end of program clinical student evaluations?

Subsidiary Research Questions

1. What is the likelihood that the Undergraduate GPA, individual measures of the Graduate Record Exam (Verbal, Quantitative, and Writing), grades at the end of the first semester (GPA1), and final cumulative GPA (GPAEP) predict end of program quantitative clinical student site supervisor evaluations for Practicum?
2. What is the likelihood that the Undergraduate GPA and individual measures of the Graduate Record Exam (Verbal, Quantitative, and Writing), grades at the end of the first semester (GPA1), and final cumulative GPA (GPAEP) predict end of program quantitative clinical student site supervisor evaluations for Internship I?
3. What is the likelihood that the Undergraduate GPA and individual measures of the Graduate Record Exam (Verbal, Quantitative, and Writing), grades at the end of the first semester (GPA1), and final cumulative GPA (GPAEP) predict end of program quantitative clinical student site supervisor evaluations for Internship II?

Significance of the Study

This study contributes to the body of knowledge on graduate admissions policies and professional programs with a behavioral outcome measure. In particular, it has focused on those graduate students enrolled in a fully online master's degree program, adding to knowledge about this delivery model of education.

The function of admission policies and practices developed by institutions is to identify and select those applicants believed to have the capacity to be successful academically, achieve

the desired training outcome, and continue to degree completion. This study contributes to this goal. This study contributes to the current research on the topic of admission by looking at admission criteria multidimensionally, both academically and according to performance criteria outcomes.

Admission criteria are used by institutions of higher education to identify which students they will admit to their programs. Admissions criteria to graduate degree programs typically include an Undergraduate GPA score, a standardized test, recommendations, and some form of a writing sample. The premise is that students who earned high grades in school will continue to receive high grades in future studies and continue to perform well in college (Astin & Antonio, 2012). Research on the topic of admission and the selection of qualified individuals encompasses undergraduate, graduate, and professional education within all disciplines and professions. The focus of this research is specific to graduate admission criteria used for selection of students seeking a graduate professional education in counseling and school counseling.

Research findings to date are valuable in having clearly identified an important relationship between academic admission criteria such as undergraduate GPA and standardized test scores with select academic outcomes. Recent calls by scholars in the field are to expand the study of admission by considering student performance outcomes. Little research has looked at the relationship between the cognitive aspects of admission criteria and the non-cognitive performance outcome measurements. The question remains whether traditional admissions criteria predict if students will be successful clinicians. This study seeks to answer the question whether academic admission criteria are good predictors of a student's clinical success.

Professions with an experiential component may need to view admissions from an alternative perspective in order to select those individuals who will be the most effective

practitioners in the field. Current research is limited in exploring the relationship between undergraduate GPA and GRE scores with clinical success, an outcomes-based measurement of success. Studies that consider GPA and GRE with a student's grades are widespread and include research by Kuncel and Hezlett (2007); Kuncel, Hezlett, and Ones (2001); and Kuncel, Wee, Serafin, and Hezlett (2010). These studies did not look at the relationship between admission standards and a behavioral outcome component.

This study sought to look into these questions by examining the relationship between admissions criteria, including undergraduate GPA and GRE scores, with a clinical measure indicative of academic success. Clinical measures are the observed performance of students while they are practicing the skills they have learned throughout their graduate education. The present study examined preadmission academic requirements for those applying to counselor graduate programs and clinical performance outcomes between the years of 2010 and 2018. This study contributes to the topic of admissions and adds further understanding to policies on admission for programs with a didactic and experiential component of learning

Chapter 2: Review of Related Literature

The following chapter is divided into two sections. The first section is an examination of the importance of clinical assessments in counseling and school counseling programs (American Counseling Association, 2014; Kerl et al., 2002). The second section reviews the relevant research literature related to distance education and online learning (Allen & Seaman, 2007, 2013, 2014). These theories include human and social capital, multiple intelligence theory, and the concept of assessments related to Astin's I-E-O model (Astin, 1991). The theoretical perspectives presented in the second sections are based upon a macro-level of analysis where the theories explain the larger relationships of social situations as they relate to selection and admission in higher education, especially with the graduate student population (Harper & Leicht, 2015).

Graduate Student Outcome

As online learning continues to be accepted by both students and institutions of higher education, supporting research in this area continues (Nguyen, 2015). Yet, little research focuses on the graduate student; most of the research is on the bachelor's level. Given the rise in graduate student enrollments in online programs, it follows that this population deserves greater attention. Focused on individual graduate courses, Hickey, McAleer, and Khalili (2015) studied E-learning and traditional learning outcomes in a psychiatry training course using a pre- and post-test on learning outcomes. These authors found that there was no difference in the learning between the students who completed a module online versus in person lecture format. In addition, Hickey et al. (2015) found that the students were satisfied with the learning they received in both the online and the in-person lecture format.

Some studies used samples of students enrolled in fully online graduate programs. Yet, these studies focused on individual course comparisons and were based on small sample sizes.

McGinley, Osgood, and Kenney (2012) examined students who completed an online graduate degree. Their sample included students who pursued a master's degree in education. The sample size consisted of 48 total students: 22 distance and 26 traditional students. These authors compared outcomes for one course in special education issues. The results were based on outcomes from two sources: final course grades that measured student achievement, and a class survey that measured student satisfaction based upon their perceived cognitive development and higher order thinking skills. Again, no significant difference was found in a comparison of final grades between the two class sections.

Overall, a limited amount of research on any comparisons between online learning and in-person learning is available. This is especially important now given the total move to distance and remote learning because of the COVID-19 pandemic. Authors who have studied full online degree programs are Goodman, Melkers, and Pallais (2016, 2019). Goodman et al. (2016) conducted a study that used student enrollment data from Georgia Tech, the largest online master's degree program in computer science in the United States. Their extensive research included data from six cohorts of students who enrolled beginning spring 2014, fall 2014, spring 2015, fall 2015, spring 2016, and fall 2016. The authors identified some differences in the characteristics of the online student compared to the traditional student. The online program attracted more U.S. citizens, had an older demographic, and had an applicant population from those mostly in middle career jobs. However, the authors found that applicants in both programs were similar in terms of gender and race. An overall UGPA of 3.0 was the minimum standard admission criteria for both programs. GRE test scores were not an admission requirement; therefore, the authors looked at applicant SAT scores. Online applicants had lower SAT scores than those applicants who applied to the campus programs. This suggests that the online student

is weaker academically than the on-ground program applicant. However, the online student admitted to the master's program was more likely to accept the offer of admission. This suggests that they had fewer educational opportunities available to them. These authors suggested the possibility that the availability of an online option for an advanced degree may be the only available opportunity for mid-career older students who perhaps had lower prior academic credentials and were less likely able to advance educationally. The Georgia Tech program suggests that online coursework can increase overall educational attainment opportunities for students who would otherwise not be able to pursue an advanced degree, and increases access for this group of students (Goodman et al., 2019).

Alternative Methods of Learning Delivery

As institutions continually seek to meet the educational needs of the populations they serve, they have responded with the introduction of alternative models of instructional delivery (Christensen & Eyring, 2011). Distance education is an example of this departure from traditional face-to-face instruction. It is a form of educational delivery that uses technology to bring learning to students and bridge a physical separation between the instructor and the student. This type of delivery helps to increase access to knowledge by magnifying the physical boundaries of the institution (Anderson et al., 2012; Duderstadt, 2009; Miller et al., 2017; Simonson et al., 2019).

Distance education was conceived following the creation of and continued advancement in technological developments. Correspondence study, where information was transmitted between the student and instructor by mail, was the first alternative delivery method created by institutions. A sequence of technological innovations beginning in the 1970s coupled with the observation by institutions that distance education could be beneficial to both institution and society advanced a progression of distance education options for students. As technology

continued to advance, as well as multimedia that included broadcast media, cassettes, audio conferencing, DVDs, and CD-ROMs, pedagogies began to include these technologies. The structure of learning adopted available technologies. The invention of the computer and internet advanced distance education and increased opportunities for more students to complete their undergraduate and graduate education (Barker et al., 1989; Harasim, 2017; Sumner, 2000).

One form of distance education is online learning. This mode is characterized by a physical divide where the internet is the sole link between the student, course instructor, and other students (Harasim, 2017; Radford, 2011; Richards, 2012; Tribunella, 2011. In 2018, the National Center for Educational Statistics (NCES) reported that over 3 million postbaccalaureate students were enrolled in degree-granting postsecondary institutions. About 1.1 million of those postbaccalaureate students were enrolled in at least one distance education course and over 800,000 postbaccalaureate students were enrolled as online students completing a degree solely online. That represents about 29% of all postbaccalaureate students enrolled in exclusively distance education courses. About 11% were enrolled in public institutions, 19% in private non-profit institutions, and almost 60% in private for-profit institutions.

Institutional investment in online offerings has continued to grow, driven in part by student interest and in part by the university's desire to meet the needs of an ever-changing environment (Christensen & Eyring, 2011). Institutions now offer both individual courses and complete degrees online. Seaman, Allen, and Seaman (2018) report in their latest survey that in 2012, over 850,000 students enrolled in graduate level courses online. The number of graduate students enrolling in graduate level courses increased each year, and in 2016 (the last reported number by this group) over 1 million graduate students enrolled in a distance course. Across levels of education, the private non-profit sector experienced 50% growth from 2012 to 2016 and

during this same period of time the private for-profit sector experienced a significant decrease of about 22%. Public institutions lead all sectors with the highest enrollments in distance education, and their growth has increased steadily during this period of time. Graduate students enrolled in exclusively online courses followed this same trend, with almost 67% enrolled at public institutions, 42% enrolled at private not-for-profit institutions, and about 12% enrolled at for-profit institutions. Before COVID-19, according to Seaman et al. (2018), 10 institutions accounted for over 10% of all distance education enrollments and this represented only 0.21% of higher education institutions.

Theories of Human and Social Capital

Described in the following sections are two common theories of capital. Human capital theories are first described, followed by social capital theories.

Human Capital

The theory of human capital proposes a basis for the well-being of individuals and nations. This theory defines the importance of the interplay between knowledge, skills, and level of education of a nation's population as well as the importance of institutions contributing to the human capital of a society. This interplay results in such positive outcomes for the individual and the nation as increasing and expanding the economic advantages, health and well-being of members of a society.

Becker (1962) introduced this concept and argued that an investment in education is a contribution to human capital. Similarly, an investment in education by nation states is an investment in the economic well-being of a nation (Choo, 2018). This is the basis of human capital theory as it relates to educational opportunity and individual educational achievement. Correspondingly, the attainment of a formal education by individual members of that society has

a reciprocal positive return for that individual, their family, and society beyond (Becker, 1974, 1993, 2002; Becker & Tomes, 1986; Blundell et al., 1999).

The associations between the attainment of a college degree and an individual's acquired knowledge, skills, economic outcomes, and other benefits are substantial and strengthen both the individual and the overall society (Ali et al., 2012; Becker, 1974, 1993, 2002; Melguizo, 2011; Tomlinson, 2017). Nation states that lack the means to increase their human capital through formal education and training risk having fewer positive human capital outcomes (Stewart, 2010).

The institution of higher education plays a critical role in contributing to the productivity and human capital of its society by fulfilling the mission of educating students. One way this is accomplished is through the admission policies of an institution. At the graduate level, admissions are typically done by individual program faculty and not by those at the institutional level of admission as is done at the undergraduate level. The goal for institutions is to admit students whom the admissions officers believe will be most successful in their field of study, contribute to their profession, and then, by extension, to the nation state at large. The admission process is a priority of the institution, as well as the individual student. The admission to college and completion of a degree is believed to be a means for the individual to expand their personal prosperity. This expansion of personal wealth in turn adds to the well-being of the community and the nation state. Economically, as colleges increase the skill sets of the students they educate and then graduate, they contribute to the capital of the region by infusing that region with a more highly skilled work force. This labor force then attracts businesses to communities, indirectly contributing to the economic opportunity of the region (Abel & Deitz, 2011; Becker, 1993; Duderstadt, 2009; Lesser, 2000; Stewart, 2010).

On an individual level, a person thinks about and then decides if the pursuit of an advanced degree is an economic benefit to them personally. This decision may take into consideration the economic benefits not only to them but also potentially to their immediate and extended families. Students have a belief and confidence that a degree earned from a system of higher education will lead to both economic and non-economic benefits (Becker, 1974, 1993, 2002; Becker & Tomes, 1986; Bragg & Ruud, 2012; Chao et al., 2008; DesJardins & Bell, 2006; OECD, 2001).

The theory of human capital may also be expanded to include a discussion about credentialing and licensure. Credentialing requires the individual members of society to extend their investment in time and money spent on their education as they reach a greater degree of specialized training in their field of study (Posselt & Grodsky, 2017). The institution similarly commits to applying additional resources to further train members of society. As the movement toward increased credentialing and licensure continues into the twenty-first century, educational institutions have become responsive to these needs by training and assessing students in their accomplishment of the skills and abilities of the profession (Choo, 2018).

Consequently, the license awarded to the individual is the validation by professional organizations that a person is eligible to practice in that field. Professions such as health, education, and counseling require advanced degrees through formal education to be eligible to apply for a license issued by individual states and an element of experiential on-the-job training (Grus, 2013; McCutcheon, 2009). The interrelationship of the individual, society, and the institution of higher education contributes to the scope and benefits of the human capital for that society in advancing the professional training and credentialing of societal members (Becker, 1993; Marginson, 2015; Walters, 2004; Zusman, 2017).

Along with the expansion and need for greater education and training, the development of technology and greater access to technological resources increased access to educational resources for members of advanced societies. The implementation of technology has created borderless and networked societies. These borderless networks enable educators to prepare students to engage in active learning in an interconnected world, optimizing their productivity (Choo, 2018). The use of technology to distribute learning and provide access to education for greater numbers of individuals gives the individual an opportunity to earn more money and contribute to the human capital of their society.

Social Capital

Another concept of capital is social capital. This is an umbrella term that integrates several concepts including social cohesion, social interaction, norms, and values (Lin, 2002). Interpersonal trust among and between members of a society result in a sense of community and a network of learners with a shared goal of learning and education. Through their ongoing interactions, participating members contribute to the interpersonal relationships between themselves, the institution they attend, and the society they are members of. This interaction leads to the formation and joining of members of a larger and smaller community (Nahapiet & Ghoshal, 1998).

Educational institutions contribute to this sense of community by the nature and goals of the structure of the organization. In educational settings, students join other like-minded individuals by selecting the same majors and professions. These students come together in training and their professional orientation. They share a combined sense of learning and professional agreement through ongoing peer-to-peer interactions and professional development. Those who train and practice in a profession share a mutual engagement of activities, values, and

behavioral guidelines in which to practice the profession. This mutual engagement helps to form a community of professionals.

A community of learners not only includes those within a specific degree program, but can also include a variety of individuals, with training from different educational institutions pursuing a similar profession to form a community of participants. This sense of shared community and shared practice connects people professionally and interpersonally (Napapiet & Ghoshal, 1998; Wenger, 1998).

Human and Social Capital

Both human capital and social capital contribute to the benefits for the individual and the society at large. Members of a profession have confidence that their community shares their professional values and outlook. They also have confidence that students earning the corresponding academic degrees exhibit a certain level of competence, knowledge, and ability in a field of study (Becker, 1993). The professions of counseling and school counseling mandate advanced education beyond the bachelor's degree. This advanced education includes on-the-job training where the individual must exhibit and apply specific individual skills as well as professional and ethical behaviors to be successful in the field (Gladding, 2012).

Two individual abilities noted in human capital theory but also found in social capital theory are interpersonal and intrapersonal skills. Interpersonal skills are defined as teamwork and leadership. Intrapersonal skills include self-discipline, self-directed learning, and making judgments based on moral and ethical values (OECD, 2001). Both types of skills are foundational to the profession of counseling. Counselors must work as a team with their clients, be self-directed leaders, embrace lifelong learning, listen without judgment, and have a highly developed moral and ethical sense. They also signify a level of maturity, which is needed for successful counseling (Gladding, 2012). These skills are developed through counselor training

programs available in higher education and are valuable in adding to the human capital needs of the society.

Multiple Intelligence Theory

The theory of multiple intelligences is used in this study as a theoretical framework to provide support for a better understanding of why an expanded view of admission criteria may be appropriate for graduate study. Those studying human potential and intellect have expanded the theoretical concept of human intelligence to be viewed as more than a single measure of intelligence (McGill, 2016; Sternberg, 2018).

One such theory, viewed as more expansive and comprehensive, is multiple intelligence (Gardner, 1983, 1993). This theory encompasses a comprehensive and inclusive view of human intellect that includes linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, interpersonal, and intrapersonal forms of intelligence. It is based on the premise that all people possess different talents and abilities. A lack of talent in one ability does not translate into a lack of intelligence or a lack of ability in another area. Nor does a high level of intelligence in one area equate to a high level of intelligence in another area. These biological potentials differentiate the mental abilities and methods people use in thinking, learning, and selecting careers and professions (Sternberg, 1989).

Multiple Intelligences and College Admission Policies

According to Gardner (1983, 1993), admission of students into college and the use of standardized tests as a measure of ability represents a skewed and limited view of the wide range of cognitive abilities people possess. The admission process, viewed as a gatekeeping function or means to select the most qualified applicants (Homrich et al., 2014); Swank & Smith-Adcock, 2014), may be denying admission based on a limited assessment of a person's abilities (Homrich et al., 2014). Evaluating an individual by their full range of human intelligence may be

considered a more ethical and egalitarian approach to assessing human abilities for admission to college (Gardner, 1993). The emphasis on standardized tests for admission relies on only two intelligences: linguistic and logical-mathematical, limiting the identification of people who may possess the academic potential to be successful students (Sedlacek, 2004).

Some undergraduate admissions offices have begun to expand their policies on admission by considering a more holistic approach to admission, one which de-emphasizes their reliance on a standardized test for selection to college. The test-optional admission policy adopted by some undergraduate institutions proposes the elimination of standardized tests as an admission tool. This policy provides a means to view applicants in a more holistic way, in their totality, instead of assessing them only on certain cognitive skills believed to be necessary to success in college (Furuta 2017; Jaschik, 2012; Simon, 2015; Sternberg, 2015). The holistic approach to admission aligns with Gardner's (1993) theory of multiple intelligences. An overreliance on the SAT to predict students' future academic success may exclude some potentially good students by excluding the consideration of other natural intelligences (Sternberg, 2010).

The test-optional admission policy has received increasing support from all U.S. institutions. There are over 1,000 four-year degree-granting institutions across the country that have adapted some form of test optional admissions (Fairtest.org). Another movement is for colleges to adapt an open access policy of admissions where no standardized test is required for admission. This open access policy has also gained momentum among non-selective colleges, which report overall increases in graduation rates due to this admission policy (Doyle, 2010). Proponents of this movement suggest that eliminating test scores in college admissions does not result in admitting less qualified students; it will instead increase college access to underrepresented minorities (Schaeffer, 2018). However, research results are mixed and do not

fully support these predicted outcomes. Wainer's (2011) study of SAT score submitters and non-submitters at Bowdoin College found that applicants who had lower test scores chose not to submit standardized scores as part of their application. The applicants who did not submit a test score reported lower first year GPAs than those who submitted a score with their application.

Those studying the test-optional movement have also considered the difference between applicants to public versus private institutions. Public institutions reported few differences between submitters and non-submitters and their subsequent college performance. Yet, when they looked at a student population from private institutions, there was a difference between the two groups. Those who submitted test scores academically outperformed those who did not on both their freshman GPA and overall GPA (Hiss & Franks, 2014).

The assertion made that instituting a test-optional policy will result in admitting more minority students and students from underrepresented populations was studied by Belasco et al. (2015). These authors' study examined 180 selective liberal arts colleges in the United States and spanned two decades of data from 1992 to 2010. Their findings did not support the rationale for the adoption of a test-optional policy. Institutions with test-optional policies enrolled fewer low-income students than test-requiring institutions; it did not result in a more diverse student population. However, an unanticipated outcome of the test-optional policy was an increase in the overall number of applicants to those institutions with this policy when compared to institutions that did not have the test-optional policy.

Mattern and Allen (2016) suggested in their technical brief on the test-optional movement that admission to college is more than a one-dimensional decision and needs a more comprehensive approach to deciding who to admit. These authors concluded that a more holistic approach where not only a test score or high school grades are considered, but where three or

four benchmarks are considered, is the more appropriate method to review an applicant's preparedness for college and college success. Testing policies are now being evaluated and questioned by both undergraduate and graduate institutions.

The standard use of GRE and other standardized tests for admission criteria for professional education in counseling may not measure the potential for future achievement of individuals pursuing this career. The theory of multiple intelligences would encourage the application criteria to include an evaluation of applicants' interpersonal and intrapersonal intelligence. This would consider how applicants apply knowledge about themselves and understanding of others to guide their thinking and actions (Sternberg & Sternberg, 2017). Therefore, the theory of multiple intelligence helps inform a view of admissions that goes beyond standardized admissions tests and seeks to find the best candidates based on an expanded view of intelligence and skills necessary to be successful in their desired field.

Multiple Intelligences and Association to a Career

The concept of multiple intelligences can also be extended to the graduate degree individuals select and their preferred career path (Sternberg, 1989). Overall, intelligence is viewed as a bio-psychological aptitude possessed by every person but with individual differences and distinctions. People are predisposed to select careers and professions that utilize their innate ability (Davis et al., 2011). One form of intelligence is the ability to understand the feelings, goals, and underlying meaning of words. Understanding people's feelings and being attuned to emotional feelings is integral to the profession of counseling and school counseling. It is essential that those training for these fields either possess the ability or possess the ability to be trained in this ability to be able to help patients (Kaebler & Schwartz, 2014). The expanded view of intelligence developed by Gardner (1983) has been studied in relation to emotional intelligence, which has been developed from the personal intelligences he identified.

A review of the literature on the construct of emotional intelligence by Brackett, Rivers, and Salovey (2011) found several connections to this concept with academic and career success. These authors concluded that a generally positive relationship exists between emotional intelligence, intellectual success, and success in a career. In addition, this is an intelligence that people have the ability to learn and to apply to their life and work. Personal intelligences are characteristic of therapists, religious and political leaders, teachers, and parents (Gardner, 1983).

Personal intelligences are categorized as interpersonal and intrapersonal, and represent a type of intelligence and a means to process information needed in the profession of counseling. Interpersonal intelligence is the ability to understand other people and to accurately grasp what motivates them—how they interact with peers and in careers; the moods and individual temperaments that impact their decisions and actions; recognizing the differences and distinctions among people; and using these distinctions to grasp why certain people act the way they do. Intrapersonal intelligence is the understanding of oneself, of being in touch with one's intelligence, emotions, and limitations. This intelligence is a talent that people possess to work with and understand others (Gardner, 1983, 1993).

These two intelligences have been identified as needed abilities for applicants to counselor preparation programs to possess. Swank and Smith-Adcock (2014) identified three standards established by The Council for Accreditation of Counseling and Related Educational Programs (CACREP) that are necessary for a person to become a successful counselor. These include academic aptitude, career goals, and the ability to form interpersonal relationships. These authors are proponents of an admission process that identifies counselor qualities of acceptance, empathy, and self-awareness, which are all personal characteristics found in both interpersonal

and intrapersonal intelligences. These two intelligences are important behaviors for graduate students to possess and essential for their success (Homrich et al., 2014).

The Concept of Assessment

Admissions committees gather information on applicant academic histories and then make decisions as to which candidates they will admit and who they will not admit based on that information. The assessment of incoming applicants is based on long-held practices of admission with the overall objective of training those they admit (Astin & Antonio, 2012).

Astin (1991) identified this as the development of talent and the process where students are trained and as a result of this training begin to work at the highest level possible both personally and professionally. The talent approach assumes that institutions will do everything possible to contribute to the intellectual and personal development of their students (Astin & Antonio, 2012). Astin (1991) defined a conceptual model of assessment as the I-E-O Assessment Model. The letter 'I' is defined as Inputs, or the talents and educational background a student brings to the institution. The letter 'E' represents the Experiences of the student while completing their education. The letter 'O' represents the Output, or talents developed in the student at the institution (Astin, 1991; Astin & Antonio, 2012; York et al., 2015).

The mission of a counselor training program is to train the most competent and socially responsible counselors possible. Whether or not the training program has succeeded is measured in part by an outcome assessment collected at the end of a student's clinical rotation. These clinical evaluations, which represent an outcome or measurement in a defined point in time (Astin & Antonio, 2012), help programs evaluate students on several clinical competencies. Assessment theory would argue that admissions criteria should be based on those qualities and characteristics that would best lead to good clinical evaluations and thus program success.

A program that looks at the competency of the student at the end of the program must have a way to measure or assess if the behaviors reflect the profession's objectives and end result for the training. Assessment provides a means of ensuring accountability for the quality of education and services provided. The education provided must ensure that the quality of teaching provided to learners results in acceptable program outcomes and measures the effectiveness of educational program completed. Assessment provides the means to collect information for evaluating the quality of program outcomes, and these outcomes are documented for others to review. All educators, regardless of the setting, need to be knowledgeable about assessment, testing, measurement, and evaluation (Boermann & Gaberson, 2016).

Standardized Testing

The Graduate Record Exam (GRE) is used as admission criteria for professional and graduate schools. It measures a select number of abilities that include verbal reasoning, quantitative reasoning, critical thinking, and analytical writing skills (ETS.org). Verbal Reasoning is defined by the Educational Testing Service (ETS) as the ability to analyze and evaluate written material, analyze relationships among component parts of sentences, and recognize relationships among words and concepts. Quantitative Reasoning measures problem-solving ability using basic concepts of arithmetic, algebra, geometry, and data analysis. Analytical Writing measures critical thinking and analytical writing skills, specifically the ability to articulate and support complex ideas clearly and effectively (ETS).

Academic metrics as a predictor of future academic success have a long history of research and study. Traditional measures such as the GRE, Law School Admissions Test (LSAT), and Medical College Admissions Test (MCAT), along with undergraduate GPA

(UGPA), have been used as the independent variables for graduate and professional admission research (Diamond-Dalessandro et al., 2005; Shultz & Zedeck, 2011).

Overall these variables have been shown to be positively associated with diversified measures of academic success across disciplines. A recent multi-institutional study across four state institutions looked at GRE scores and completion rates for students admitted to STEM PhD degree programs. The findings reported strong evidence that GRE scores were not predictive of STEM doctoral degree completion rates (Petersen et al., 2018). GREQ scores did not predict those females who completed their PhD. GREQ scores for men were higher than female scores, yet these scores did not predict the men who completed their PhD. GRE scores in general did not predict time to degree completion or predict who would leave the program (Peterson et al., 2018).

Kuncel, Hezlett, and Ones (2001) examined MAT scores, another form of standardized testing that measures analytical and critical thinking skills (Miller Analogies Test, 2019) and graduate academic success. This extensive meta-analysis included 163 independent samples from 127 studies with a total of 20,352 subjects. A discussion of results confirmed that the MAT is a valid predictor of student performance, measures of job performance, and creativity, and is a valuable tool in determining cognitive success, which the authors identified as general intelligence. The study strongly supported the theory that high scores on a standardized test not only predicted academic success, but also predicted career success. However, they did note that this study on the predictive ability of the MAT did not include empirical evidence of behavioral ratings.

Additional research has been done specifically on GRE and UGPA. The Kuncel, Hezlett, and Ones (2001) meta-analysis study examined two standardized measures of the GRE and

UGPA to determine if these two measures were predictive of graduate school performance. Results yielded 6,589 correlations for 8 different criteria, with a sample size of 82,659 graduate students from across disciplines of the humanities, social sciences, life sciences, and math-physical sciences. Subsets of the GRE, GREV, GREQ, GREW were found to be valid predictors of first year graduate GPA and other factors such as final comprehensive examination scores. The authors found that considering GRE and UGPA together was a greater predictor of undergraduate GPA than each criterion alone.

In addition, a 2007 study by Kuncel and Hezlett expanded their review of standardized tests to include, along with overall GRE test scores, individual subject tests for the GRE, LSAT, and the Medical College Admissions Test (MCAT). Results of the meta-analysis concluded that general standardized tests are effective predictors of performance in graduate school. A combination of criteria, including standardized tests along with undergraduate grades, can better predict certain academic outcomes than either one alone. Finally, the combination of test scores with undergraduate grades was most predictive of academic success.

There has been robust study on standardized admission criteria for medical school. Admission to medical school has been identified as one of the more difficult admissions processes for a student to undertake. The topic has been studied by several researchers including Edwards, Friedman, and Pearce (2013); Mercer and Puddey (2011); Monroe, Quinn, Samuelson, Dunleavy, and Dowd (2013); Sadik, Woldemariam, and Wang (2017); Schripsema, van Trigt, Borleffs, and Cohen-Schotanus (2014); Patterson, Knight, Dowell, Nicholson, Cousans, and Cleland (2016); Muller and Kase (2010); Puddey and Mercer (2014); and Dunleavy, Kroopnick, Dowd, Searcy, and Zhao (2013).

A 10-year review of medical school admission officers by Monroe et al. (2013) asked deans from all United States and Canadian medical schools who had used MCAT scores in their admission decision to report and rate the importance of applicant information in making admission decisions. One hundred twenty deans or their associates responded to the survey that asked them to rate the importance of UGPA, MCAT, and other admission data in their admission process. Six of the respondents were from Canadian medical schools and the rest were from U.S. medical schools throughout different regions of the United States. The results of this study concluded that little has changed in the admission process since the 1980s: the MCAT scores and UGPA are still the two most important criteria used to determine if an applicant is admitted. These authors found that MCAT scores and UGPA were the most important factors considered for inviting applicants for an initial interview. However, these two criteria were less important in making a final admission decision.

Dunleavy et al. (2013) studied the predictive validity of the MCAT and UGPA on academic performance through medical school. Their study looked at admission criteria and the relationship to a student's continued enrollment without breaks in study. They also looked at the relationship between admission criteria and passing rates for Steps 1 and 2 of the medical licensing examination, and first-time success passing Steps 1 and 2 of the medical licensing examination. A convenience sample of matriculated students enrolled between 2001 and 2004 at 119 U.S. medical schools was included in a logistic regression analysis. Results of this study concluded that UGPAs and MCAT total scores together predicted if students continued through medical school without any breaks. The total MCAT total score was a better predictor of academic performance than UGPA. However, Dunleavy et al. (2013) also found that when

UGPA and MCAT total scores were considered together in admission, this combination was the best predictor of a medical student's academic success.

Conclusion

As this chapter demonstrates, the theories of human and social capital, multiple intelligence theory, and I-E-O perspective on assessment provide important insight into the reasons for considering this topic, and insights into the admission process. They help form a more expanded view of admissions that potentially includes criteria besides standardized test scores and GPA. Populations of students from the graduate level of education have been less represented in the study of admission compared to research on this topic at the undergraduate level (Cummings et al., 2013; Lyke & Frank, 2012; Renfro-Michel et al., 2010). In addition, in the online space, the priority of researchers has been to examine individual courses and not academic outcomes for students who completed their full degree online.

Research is limited that exclusively examined academic outcomes of students enrolled in online learning environments. Holzweiss, Joyner, Fuller, Hendersen, and Young (2014) noted that greater understanding is needed as to the meaning of learning for the online graduate student and called for more research on the subject. Phelan (2015) identified a need for higher quality research in terms of the methodology, the theoretical basis, and a more specific definition of success beyond a level of satisfaction. The research of this dissertation was conducted to contribute to the knowledge of outcomes of the online graduate student and the student who completed their full degree online.

Chapter 3: Methodology

Introduction

The purpose of this ex post facto design was to study the relationship between selection criteria for admission—specifically undergraduate GPA (UGPA) and standardized test scores—and student clinical assessment scores. This study used graduate students who completed their master's degrees in counseling and school counseling through an online delivery method. An ex post facto design (Heppner, Wampold, & Kivlighan, 2007) uses data from groups where the condition already happened and cannot be manipulated.

Restatement of Research and Subsidiary Questions

What was the likelihood that selection criteria for admission to a competency-based degree program would predict end of program clinical student evaluations? What was the likelihood that first semester GPA (GPA1) and end of program overall GPA (GPAEP) would predict end of program clinical student evaluations?

Subsidiary Research Question One

Did Undergraduate GPA and Graduate Record Exam scores (Verbal, Quantitative, and Writing), GPA1, and GPAEP scores predict end of program student evaluations for Practicum?

Subsidiary Research Question Two

Did Undergraduate GPA and Graduate Record Exam scores (Verbal, Quantitative, and Writing), GPA1, and GPAEP scores predict end of program student evaluations for Internship I?

Subsidiary Research Question Three

Did Undergraduate GPA and Graduate Record Exam scores (Verbal, Quantitative, and Writing), GPA1, and GPAEP scores predict end of program student evaluations for Internship II?

Setting

The setting for this research was a 4-year, private not-for-profit, large suburban Catholic university. Degree offerings include bachelor's degrees, master's degrees, post-master's certificates, doctoral degrees in research and scholarship, and doctoral degrees in professional practice (NCES, 2016). University enrollment was about 10,000 students, with approximately 6,000 undergraduate students and 4,000 graduate students enrolled for the fall 2016 semester. Graduate student enrollments were about 60 percent enrolled as full-time students and 40 percent enrolled as part-time students.

The counseling and school counseling programs were delivered online and the program design was based on adult learning pedagogy (Knowles, 1984). They were housed within a professional department of the university that offers both master's and doctoral level degree programs. The online-based programs were delivered at a distance and online through the internet (Seaman, Allen, & Seaman, 2018). The online delivery methods were considered equitable to their comparable on-campus program, and students adhere to both department and university policies and procedures. Program curriculum, degree credit requirements, course titles, credits, transcripts, and diploma are the same as the on-campus delivery. Each course carries a three-credit weight. The Master of Arts, Counseling and Master of Arts, School Counseling are each a total of 48 credits. The majority of students completed their 48 credits in eight semesters by enrolling in two courses per semester three semesters per year until degree completion.

Governance for the online delivery methods within the college fall under the domain of the dean of the college, department chairs, and then a program director. The online program was governed by a department faculty member who acts as the academic director and has oversight for all academic functions of the program. This role was equivalent to that of the program

director. My role in the online program was one that was primarily administrative in nature, working closely with the academic director on administrative aspects of the online programs.

The model for the online programs was established in 1999 and based on a cohort model of learning. Students applied and began the program as a team following a predetermined course schedule. Each cohort was referred to as a learning team. Team members progressed through the program together and enrolled in the same two courses, three semesters per year until degree completion (Lei et al., 2011). The majority of students in the online program took approximately 2-l/2 years to complete their degree, although some students fell off of the predetermined schedule due to personal or academic reasons, causing them to complete their fieldwork at a later date than originally outlined for them based upon their learning team.

Research Design

An ex post facto research design was selected, as it was done after the fact or where the incidences have already happened (Salkind, 2010). A non-intervention correlational quantitative research design was used in this study. According to Creswell (2015), this design examines the association between two or more variables. The degree of association was explained as a number and indicates whether the variables are related. This association was determined using one group of individuals and does not compare groups of individuals as would be the case in an experimental design. A convenience sample and not randomly assigned individuals using numerical, historical data was used for this study. Creswell (2015) describes this as a quasi-experiment since participants were not randomly assigned to groups, and groups of subjects did not influence the outcomes for each other.

The convenience sample was students who had graduated with a master's degree in either counseling or school counseling. A degree requirement for both majors was to have completed three semesters of fieldwork experience as part of their professional training. Fieldwork was

divided into three sequential courses after most of their academic non-fieldwork courses had been completed. The evaluative fieldwork data was analyzed as one group and not separated out by degree program. This was done because both curriculums resembled each other, with similar clinical evaluations. Students regardless of whether training as counselors or school counselors were considered professionals who would work applying clinical knowledge learned throughout their coursework in both settings, a school setting, or in a mental health setting. The curriculum and training for each major followed a similar curriculum. Differentiating the majors were two courses. Those in the school counseling major enrolled in two school-related courses and those in the counseling major enrolled in two counseling-related courses. The other distinction was the different site placements for internship; students pursuing a school counseling major completed their placement in a K-12 environment, while those in the Counseling major completed their internships in a mental health type agency. However, regardless of the site placement, the content of the evaluations for students while on site were the same. The evaluations by site supervisors for the three fieldwork courses—Practicum, Internship I, and Internship II—asked students to be rated on the same two constructs: Professional Skills and Counseling Skills. All students must be able to demonstrate professional behaviors, which include the skill of counseling both individually and in a group, following ethical standards of behavior, accepting feedback from site supervisors to grow and develop, taking effective notes, being able to know their site environment whether a mental health setting or a school setting, and applying what they have learned to their site experience (ASCA, 2016; CACREP: Guiding Principles, n.d.).

The fieldwork was done under the supervision of a clinical site supervisor who was a licensed professional counselor employed by a mental health agency for counseling students, or a certified school counselor employed as a school counselor in a K-12 school environment for

those majoring in school counseling (Carney et al., 1998; Murphy & Kaffenberger, 2007). Clinical courses included both a 3-credit classroom-based course and an on-site fieldwork presence. Students received a final course grade based upon their fieldwork and coursework. The classroom-based portion of the course was done online through the online course management system.

Program policy requires that students earn a final grade of B or better in each clinical course and meet a specific on-site hour requirement for course completion. Grades were reported from an A with a weight of 4.0 to a C with a weight of 2.0. A grade of B carried a 3.0 weight and these grades were included in the final cumulative overall GPA. Each clinical course had to be completed before students could move to the next course in the sequence. The hour requirements were 100 clinical hours for Practicum, 300 clinical hours for Internship I, and 300 clinical hours for Internship II.

At the end of the semester, students were required to submit a clinical evaluation from their site supervisor to their course instructor. Evaluations were part of the student's clinical file (refer to Appendix A). The field site supervisors' evaluations were used to demonstrate if the student met an adequate level of professional competence (ACA, 2014, Code of Ethics; ASCA, 2016, Code of Ethics). Two constructs of student progress were used in this study: (a) Student's Professional Skills and (b) Student's Counseling Skills. Each of the constructs had seven individual items that made up the overall construct, and each item was given a rating by the site supervisor. The site supervisor's Field Placement Evaluation for Students Enrolled in the MA Counseling and MA School Counseling Degree (see Appendix A) was based on a 5-point Likert type scale with 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree, and N/A = Not Applicable for each of the items rated (Sullivan & Artino, 2013). This research used evaluations

from site supervisors that were complete. A fully completed evaluation was defined as one in which a rating was provided for each of the seven items for both constructs. Evaluation scores were used as the dependent variable in this study.

Admission data for each of the students with complete evaluations was collected as the independent variable. Admission data was collected through electronic university records. This was information was reported from the documents submitted electronically with the application and held by the university. The documents included the applicant's personal statement, resume, three letters of recommendation, transcripts showing their overall undergraduate GPA, and a Graduate Record Exam test score. The Graduate Record Exam test score has three sections (Quantitative, Verbal, and Written); each receives a score. Admission data used for the independent variables included only Undergraduate GPA and scores for the three sections of the GRE. This data was collected through the university-held electronic student information system for the years 2008 to 2016. The disparity in years of data collected between the dependent and independent variable was due to the online program design. On average it took students 2-l/2 years from the start of the master's degree program to degree completion; therefore, in order to match student incoming admission data with outgoing clinical evaluations, data was used from about 2-l/2 years prior to enrollment in clinical courses.

Sample and Collection of Data

Dependent Variable. Dependent variable data was based on evaluations for students who graduated with an online Master of Arts in Counseling or Master of Arts in School Counseling between 2010 and 2018. The data came from student records held at the university. The original data contained 1519 individual entries, which represented on-site evaluations for the clinical courses Practicum, Internship I, and Internship II for graduates between 2010 and 2018. However, this database included graduates from both on-campus and online degree programs.

Therefore the first step was eliminating all on-campus evaluations (181 entries). This brought the total number of evaluations from 1519 to 1338. The next step included removing all duplicate evaluations (376 entries). This brought the total from 1338 to 962. All incomplete evaluations were then eliminated (162), bringing the total from 962 to 800. Complete on-site evaluations were those defined as having all seven items scored for both Professional Skills and Counseling Skills. If an evaluation was missing a score for any of the seven items on each skill, this was then considered an incomplete evaluation and removed, as above. Finally, those evaluations of students who were missing either an Undergraduate GPA, GRE test score, first semester GPA, or end of semester GPA were removed (146 entries). This brought the total from 800 to 654. The final sample, then, contained 654 total evaluations, divided between Practicum (220), Internship I (220), and Internship II (214). There may have been several reasons why Practicum and Internship I had 6 more evaluations than Internship II, such as an incomplete evaluation or other reasons, but these were nonetheless included in the sample due to degree completion.

Independent Variables. Data for the independent variables was collected through university-held electronic student records. The data for the independent variables was collected for years 2008 to 2016. The disparity in years of data collected between the dependent and independent variable was due to the online program design. On average it takes students 2-l/2 years from the start of the master's degree program to degree completion; therefore, in order to match student incoming admission data with outgoing clinical evaluations, data was used from about 2-l/2 years prior to enrollment in clinical courses.

Demographic Information. The electronic admission application used by the university asked individuals to voluntarily report personal information such as sex, birth date, major area of study, and method of delivery. All personal information was de-identified by the university in

order to preserve applicant anonymity. Applicant names, social security numbers, and personal information such as address, telephone numbers, or any identification numbers created by the university to identify the individual student at the time of application were removed.

Applicants selected their major when they applied, choosing either professional counseling or school counseling. Method of delivery selected included traditional on-ground delivery or online delivery. Applicants could not select both delivery methods and had to decide the method of program delivery at the time of admission. Students self-reported sex/gender identification on their application as female, male, or not identified. Race included categories of White, Black, Undisclosed, American Indian, Hispanic, Mixed Race, Pacific Islander, and Asian. Ages were grouped based upon their age at the time of their application to the program and ranged from 21 to 53. Analysis was done to see if a relationship existed between age and the independent variables as 21-29, 30-39, 40-49 and 51-53. Although the number of students in this age category was not large, it was included in the analysis to see if this age category showed any relationship with the independent variables.

Definitions of Research Variables

The data selection and organization for this research was based on Astin's (1991) I-E-O model. This model encompasses the progression and process from admission to degree completion for students in a graduate program. The I or Input data part of the I-E-O model used for this study was GRE test scores and undergraduate GPA. The E or Experience was represented by the earned educational degree. The O or Output was the clinical evaluations of students in their last three semesters in the graduate program. Measuring the output of student performance following professional education and training embraces a talent development approach. A focus on admission criteria, selecting those with the best academic credentials,

embraces a resources approach to education. In contrast, an evaluation of how well students do after completing an education was defined as a talent development approach (Astin, 1991).

In admissions the Inputs are the admission criteria supplied by each student, which were then used as a measurement of the student's prospects for success. Their experiences or educational training shapes them, which in turn influences their outputs or talents developed while they attended an educational program.

Dependent Variables

The dependent variables for this study were academic success measured through end of program clinical evaluations in three separate courses: Practicum, Internship I, and Internship II (see Appendix A). Practicum was defined as supervised field work for counselors focusing on integration of research theory and practice. Internship I was supervised field work for counselors with accompanying seminar. A setting appropriate to area of concentration including community agencies, hospitals, treatment centers, higher education, and secondary or elementary schools were selected by counselors. Internship II was continuation of supervised field work for counselors with accompanying seminar. Students selected a clinical site appropriate to their area of concentration—community agencies, hospitals, treatment centers, higher education, or secondary or elementary educations. These courses were sequential, with every student required to earn a grade of B or better to then move to the next course. This process continued until all three clinical courses were completed and final grades awarded. Degrees in counseling and school counseling were not awarded until the student showed a final grade for each course and submitted a site supervisor's evaluation for each one. The courses were not completed concurrently.

Students were evaluated on two constructs during each of the three courses: (a) Student's Professional Skills and (b) Student's Counseling Skills. A construct was defined as a behavioral outcome and was used to assess personal characteristics (Cronbach & Meehl, 1955). A construct was an overt behavior that was observable and could be rated (Cohen & Swerdlik, 2017). Each construct was made up of seven attributes, and a mean was calculated based upon the seven attributes of each construct. Construct means for each of the courses were used in the data analysis.

Construct Reliability

Cronbach's alpha was used to assess the reliability or the strength of consistency of the test items on the clinical evaluation forms (https://data.library.virginia.edu/using-and-interpreting-cronbachs-alpha/). The reliability was tested using Cronbach's alpha for each of the seven questions that comprised Professional Skills and Counseling Skills for Practicum, Internship I, and Internship II. Overall a high level of consistency was found for all three clinical courses for each of the two constructs, Professional Skills and Counseling Skills. The reliability coefficients for the six constructs are summarized below. Cronbach alpha scores of .70, .80, and .90 are considered good scores; the higher the number, the better predictor of the reliability (Morgan, Leech, Gloeckner, & Barrett, 2012). The lowest score (0.780) was found for Internship II, Counseling Skills, Professional Skills and the highest score was for Internship One, Counseling Skills, Professional Skills (0.919). These results then show that the evaluation instrument was internally consistent or reliable.

For Professional Skills in Practicum a seven-question assessment instrument was used to evaluate students on seven factors related to their professional skills. The construct had a high level of internal consistency, as determined by a Cronbach's alpha of 0.892. Counseling Skills in Practicum had an internal consistency, as determined by a Cronbach's alpha of 0.914. Internship

I Professional Skills had a Cronbach's alpha of 0.891. Internship I Counseling Skills had a high level of internal consistency, as determined by a Cronbach's alpha of 0.919. For Internship II Professional Skills, the construct had a high level of internal consistency as determined by a Cronbach's alpha of 0.780, and for Internship II Counseling Skills the Cronbach's alpha was 0.835.

Academic Outcome Variables

Also included in this study and as part of the analysis were student's GPA after the first semester and their overall end of program GPA. Utilizing these academic criteria provided a unique opportunity to look at the predictive ability of first semester grades with end of program success. Weighted averages were calculated using the points assigned to individual grades and then multiplied by the number of credits assigned to the course. First semester grades included the calculation of the individual points for each course completed multiplied by three (3), the credits assigned to each course. The Final GPA was a single GPA which was a cumulative total of all graduate courses completed upon completion of the graduate degree. The Final GPA consisted of the total cumulative and calculated GPA for a total of 48 credits.

Independent Variables

Three parts of the Graduate Record Examination (GRE) were used as independent variables for four of the research questions. The general test of Graduate Record Examination (GRE) measures three types of thinking and was comprised of three corresponding sections: verbal reasoning, quantitative reasoning, and analytical writing skills (ETS.org). Verbal Reasoning scores were reported on a 130–170 score scale, in one-point increments. For GRE test takers prior to August 1, 2011, score reports include a test taker's Verbal Reasoning and Quantitative Reasoning scores on the prior 200–800 scales (ETS.org). The capabilities that were assessed in the GRE Quantitative Reasoning measure included reading and understanding

quantitative information, interpreting and analyzing quantitative information (including drawing inferences from data), and using mathematical methods to solve quantitative problems. For GRE test takers prior to August 1, 2011, score reports included a test taker's Verbal Reasoning and Quantitative Reasoning scores on the prior 200–800 scales (ETS.org). These were converted to the new scoring scale for both Verbal Reasoning and Quantitative Reasoning (Appendix C). A conversion table was available (Appendix C) showing old GRE scores and comparable new GRE scores (www.ETS.org) and will be used to change those with the old scale to the new scale for consistency. Analytical Writing scores were reported on a 0–6 score scale, in half-point increments. The Analytical Writing section included testing of critical thinking skills, the ability to reason, assembling evidence to develop a position, communicating complex ideas, grammar, and the mechanics of writing (www.ets.org/gre/scorelevels).

Data Analysis

Both descriptive and inferential statistics were collected and analyzed for each of the four research questions. Descriptive statistics included the three characteristics of sex/gender, ethnicity, and age. These were treated as nominal variables. Central tendency measures were processed and included measures of variability and standard deviation. Gender was a binary variable; female students were given a value of 0 and male students a value of 1. Age was included with the demographic information.

Sex/Gender, Age, and Race Demographic Analysis

Demographic descriptive statistics and analysis are included below and are broken down for each of the research questions. Overall, more females enrolled in the online counseling and school counseling programs than males. White students accounted for more enrolled students than other ethnicities. These demographic characteristics mirror the reports from the American School Counseling Association and the data presented for those in the profession of counseling.

The percentage of female school counselors was 85 compared to 15% male. In addition, the largest number of school counselors are white, at 81% (https://www.schoolcounselor.org/asca/media/asca/home/Member-Demographics.pdf). Similarly, about 73.3% of those working in the profession of counseling are female. The predominant race in this was profession was white. These numbers were similar to those found in this research. The data from this research also reported the largest number of enrolled students based upon age were in the 21–29 age range. However, within the counseling profession, the average age of male counselors in the workforce was 42.9 and of female counselors was 41.3 (https://datausa.io/profile/soc/counselors#demographics).

Demographic Summary

Following is the summary of the sample demographic information reported by course and by individual skill. This includes Practicum - Professional Skills and Counseling Skills, Internship I - Professional Skills and Counseling Skills, and Internship II - Professional Skills and Counseling Skills.

Table 1.

Descriptive Statistics

	Practicum (N= 220)	Internship I (N=220)	Internship II (N= 214)
	N (%)	N (%)	N (%)
Gender			
Female	191 (86.8)	192 (87.3)	184 (86.0)
Male	26 (11.8)	25 (11.4)	25 (11.7)
Non-responders	3 (1.4)	3 (1.4)	5 (2.3)
Race			
White	183 (83.2)	180 (81.8)	175 (81.8)

	Practicum (N= 220)	Internship I (N=220)	Internship II (N= 214)
Black	15 (6.8)	15 (6.8)	16 (7.5)
Hispanic	8 (3.6)	9 (4.1)	6 (2.8)
Asian	0 (0)	4 (1.8)	3 (1.4)
Other	5 (2.3)	3 (1.4)	3 (1.4)
Non-responders	9 (4.1)	9 (4.1)	11 (5.1)
Age			
21-29	122 (56.7)	122 (57.0)	116 (54.2)
30-39	64 (29.1)	61 (27.7)	58 (27.1)
40-49	25 (11.4)	27 (12.3)	32 (14.9_
50+	4 (1.2)	4 (1.9)	8 (3.7)
Non-responders	5 (2.3)	6 (2.7)	0 (0)

Clinical Components

The evaluations were based on five categories: (1) strongly disagree, (2) disagree, (3) agree, (4) strongly agree, and (5) not applicable (N/A). The measures of clinical competency on the evaluations were combined into two measures: (a) to include both strongly agree and agree, and (b) to include strongly disagree (Creswell, 2015).

This study was intended to find out if the independent variables were predictive of the overall outcome measure of academic success based upon site supervisors' evaluation if a student met expectations or did not meet expectations. N/A responses were not used in the evaluation, since all categories within the evaluation were expected to be completed by the site supervisor, and the student was expected to have on-site experience in all categories that were considered (Creswell, 2015).

Data Limitations

Data for this study was limited to online counseling and school counseling graduates from a program in the northeastern United States. Data was also limited to graduates who submitted evaluations from site supervisors for all three clinical courses: Practicum, Internship I, and Internship II. Data was further limited in that evaluations that were missing individual items for a series of construct questions were eliminated. This reduced the number of evaluations that could be included in this was study.

Students who completed these courses and were awarded grades may not have been motivated to ensure that the final paperwork was submitted in its entirety, limiting the number of cases that could be included in this data analysis. Course instructors reviewed all student evaluations and submitted grades if the evaluations were completed, but some students may not have been diligent in returning the evaluations. Conversely, the data may only have looked at those most motivated, diligent, and detail-oriented who followed instructions to submit paperwork to the office upon course completion.

Because site supervisors completed the evaluations as part of their supervisory role but were not paid to perform this duty, they may have been less inclined to ensure that every question on each of the individual item constructs was completed before submission to the student. The evaluations were considered lengthy, and all students may not have had the opportunity to work in a capacity that allowed for them to be evaluated on a particular item.

Treatment of Human Subjects

Informed consent was not required for data collection since this study was based upon historical archived data. An application to the Institutional Review Board was submitted and approved since it did not use live subjects, payments, unethical treatment of subjects, or

vulnerable populations used in the data collected and analyzed (Institutional Review Board, https://www.shu.edu/institutional-review-board/general-principles.cfm).

Chapter 4: Analysis of Data

An ex post facto correlational quantitative study was conducted to determine if the cognitive admission factors used in the selection process for admission to a competency-based graduate degree program predicted end of program final clinical student evaluations. Multiple linear regression was used to investigate the potential influence of multiple independent variables including UGPA, GREQ, GREV, GREW, GPA1, and GPAEP to predict students' clinical evaluation outcomes. A combined mean for the individual items that comprised Professional Skills and Counseling Skills were calculated and used in the analysis for the dependent variables for the three clinical courses: Practicum, Internship I, and Internship II. These courses run sequentially, and each student is evaluated by their on-site supervisor at the end of the course. Below are the Correlation matrices for regressions followed by the statistical outcomes for each research question based upon the individual course and then the skill.

Table 2.

Pearson Correlation Matrices for All Regressions

Variable	Professional Skills	Counseling Skills	UGPA	GREQ	GREV	GREW	GPA1
Practicum							
UGPA	-0.061	0.01					
GPEQ	0.024	0.047	0.278				
GREV	-0.071	0.022	0.208	0.562			
GREW	0.026	0.106	0.108	0.396	0.482		
GPA1	0.084	0.14	0.182	0.202	0.237	0.23	
GPAEP	0.129	0.176	0.196	0.259	0.22	0.259	0.61
Internship I							
UGPA	0.108	0.141					

Variable	Professional Skills	Counseling Skills	UGPA	GREQ	GREV	GREW	GPA1
GREQ	0.01	0.007	0.234				
GREV	-0.05	0.005	0.217	0.451			
GREW	-0.01	0.038	0.132	0.398	0.452		
GPA1	0.135	0.146	0.192	0.192	0.237	0.241	
GPAEP	0.143	0.189	0.233	0.255	0.256	0.304	0.637
Internship II							
UGPA	0.033	0.044					
GREQ	0.054	0.072	0.229				
GREV	0.033	0.032	0.203	0.43			
GREW	-0.013	0.028	0.155	0.405	0.413		
GPA1	0.101	0.11	0.134	0.208	0.225	0.238	
GPAEP	0.087	0.089	0.187	0.264	0.269	0.315	0.665

Research Question 1: Professional Skills and Counseling Skills for Practicum

Did the cognitive admission criteria submitted with a student's application to an online counseling program including their reported undergraduate GPA and scores on their Graduate Record Exam including their Verbal, Quantitative, and Writing scores, as well as their earned GPA in their first semester (GPA1) and earned cumulative GPA (GPAEP) at the conclusion of their graduate program predict their end of program student evaluations in Practicum? To investigate how well GPA, GREV, GREQ, GREW, GPA1, and GPAEP scores predicted students' evaluation scores on two criteria at the end of their Practicum course, Professional Skills and Counseling Skills were evaluated separately.

Professional Skills

A multiple linear regression was calculated to predict Practicum Professional Skills based on UGPA, GREQ, GREV, GREW, GPA1, and GPAEP. The means and standard deviations are reported in Table 3 below. The combination of variables (UGPA, GREQ, GREV, GREW, GPA1, and GPAEP) did not significantly predict Professional Skills. A statistically nonsignificant regression equation was found ($F (6, 213) = 1.415$, $p < .210$), with an R^2 of .038. The results of this study on Professional Skills scores decreased -.073 for each UGPA point, increased .005 for each GREQ point, decreased -.008 for each GREV point, increased .019 for each GREW point, increased .038 for each GPA1 point, and increased .271 for each GPAEP point. The p-values for the independent variables were above the .05 level of significance. The p-value for UGPA was 0.220; the p value for GREQ was 0.351; the p value for GREV was 0.084; the p-value for GREW was 0.652; the p-value for GPA1 was 0.705; and the p-value for GPAEP was 0.137. The independent variable of GREV was only marginally significant at .084.

Table 3.

Descriptive Statistics of Practicum Professional Skills

	Mean	Std. Deviation	N
Professional Skills	3.696	0.373	220
UGPA	3.242	0.442	220
GREQ	142.660	6.447	220
GREV	148.750	6.816	220
GREW	3.689	0.697	220
GPA1	3.778	0.321	220
GPAED	3.809	0.178	220

CI = confidence interval for *B*

Practicum Counseling Skills

A multiple linear regression was calculated to predict Counseling Skills in Practicum based on UGPA, GREQ, GREV, GREW, GPA1, and GPAEP. The means and standard deviations are reported in Table 4 below. The combination of variables (UGPA, GREQ, GREV, GREW, GPA1, and GPAEP) did not significantly predict Counseling Skills for Practicum. A statistically nonsignificant regression equation was found ($F (6, 213) = 1.473$, $p < .189$), with an R^2 of .040. The results of this study showed that Counseling Skills scores decreased -.024 for each UGPA point, increased .001for each GREQ point, decreased -.004 for each GREV point, increased .053 for each GREW point, increased .071 for each GPA1 point, and increased .322 for each GPAEP point. UGPA, GREV, GREQ, GREW, GPA1, and UGPA were not significant predictors of Counseling Skills in Practicum. The p-value for UGPA was 0.719; the p-value for GREQ was 0.925; the p-value for GREV was 0.470; the p-value for GREW was 0.263; the p-value for GPA1 was 0.529; and the p-value for GPAEP was 0.116. UGPA, GREV, GREQ, GREW, GPA1, and UGPA were not significant predictors of Counseling Skills in Practicum.

Table 4.

Descriptive Statistics of Practicum - Counseling Skills

	Mean	Std. Deviation	N
Counseling Skills	3.590	0.419	220
UGPA	3.242	0.442	220
GREQ	142.660	6.447	220
GREV	148.750	6.816	220
GREW	3.689	0.697	220

	Mean	Std. Deviation	N
GPA1	3.778	0.321	220
GPAED	3.809	0.178	220

Table 5.

Multiple Linear Regression Analysis for Admissions and End of Program Variables Predicting Outcomes of Practicum - Counseling Skills

Variable	*B*	*SE B*	95% CI	*t*	*p-values*	R^2
Constant	2.479	0.879	[.746, 4.213]	2.819	0.005	0.040
UGPA	-0.024	0.067	[-.157, .108]	-0.361	0.719	
GREQ	0.001	0.005	[-.010, .011]	0.095	0.925	
GREV	-0.004	0.005	[-.014, .007]	-0.724	0.470	
GREW	0.053	0.047	[-.040, .146]	1.122	0.263	
GPA1	0.071	0.112	[-.150, .291]	0.631	0.529	
GPAEP	0.322	0.204	[-.080, .725]	1.479	0.116	

CI - confidence interval for *B*

Research Question 2: Professional Skills and Counseling Skills for Internship I

Did the cognitive admission criteria submitted with a student's application to an online counseling program including their reported undergraduate GPA and scores on their Graduate Record Exam including their Verbal, Quantitative, and Writing scores, as well as their earned GPA in their first semester (GPA1) and earned cumulative GPA (GPAEP) at the conclusion of their graduate program predict their end of program student clinical evaluations for Internship I? To investigate how well GPA, GREV, GREQ, GREW, GPA1, and GPAEP scores predicted their evaluation scores on two criteria at the end of their Internship I course, Professional Skills and Counseling Skills were evaluated separately.

Internship I Professional Skills

A multiple linear regression was calculated to predict Professional Skills in Internship I based on UGPA, GREQ, GREV, GREW, GPA1, and GPAEP. The means and standard deviations are reported in Table 6 below. A statistically nonsignificant regression equation was found ($F (6, 213) = 1.550$, $p < .163$), with an R^2 of .042. The results of this study showed that Professional Skills increased .069 for each UGPA point, moved .000 for each GREQ point, decreased -.005 for each GREV point, decreased -.013 for each GREW point, increased 0.084 for each GPA1 point, and increased 0.197 for each GPAEP point. UGPA, GREV, GREQ, GREW, GPA1, and GPAEP were not significant predictors of Professional Skills in Internship I.

Table 6.

Descriptive Statistics of Internship I Professional Skills

	Mean	Std. Deviation	N
Professional Skills	3.806	0.331	220
GPA1	3.779	0.324	220
GPAEP	3.818	0.173	220
UGPA	3.223	0.451	220
GREQ	142.700	7.393	220
GREV	148.340	6.824	220
GREW	3.652	0.720	220

Table 7.

Multiple Linear Regression Analysis for Admissions and End of Program Variables Predicting Outcomes of Internship I Professional Skills

Variable	*B*	*SE B*	95% CI	*t*	*p-values*	R^2
Constant	3.293	0.694	[1.925, 4.661]	4.744	0.000	0.042
UGPA	0.069	0.052	[-.033, .171]	1.330	0.185	
GREQ	0.000	0.004	[-.007, 010]	0.069	0.945	
GREV	-0.005	0.004	[-.013, .003]	-1.324	0.187	
GREW	-0.013	0.036	[-.084, .059]	-0.347	0.729	
GPA1	0.084	0.089	[-.092, .260]	0.944	0.346	
GPAEP	0.197	0.172	[-.142, .536]	1.146	0.253	

CI = confidence interval for *B*

Internship I Counseling Skills

A multiple linear regression was calculated to predict Internship I Counseling Skills assessment scores based on UGPA, GREQ, GREV, GREW, GPA1, and GPAEP. The means and standard deviations are reported in Table 8 below. A statistically nonsignificant regression equation was found ($F (6, 213) = 1.965$, $p < .072$), with an R^2 of .052. Counseling Skills scores increased .101 for each UGPA point; decreased -.002 for each GREQ point; decreased -.003 for each GREV point; increased .004 for each GREW point; increased .052 for each GPA1 point; and increased .350 for each GPAEP point. UGPA, GREQ, GREV, GREW, GPA1, and UGPA

were not significant predictors of Counseling Skills in Internship I. The p-value for UGPA was 0.094; the p-value for GREQ was 0.544; the p-value for GREV was 0.508; the p-value for GREW was 0.932; the p-value for GPA1 was 0.615; and the p-value for GPAEP was 0.80.

Table 8.

Descriptive Statistics of Internship I Counseling Skills

	Mean	Std. Deviation	N
Counseling Skills	3.738	0.331	220
UGPA	3.223	0.451	220
GREQ	142.700	7.393	220
GREV	148.340	6.824	220
GREW	3.652	0.720	220
GPA1	3.779	0.324	220
GPAEP	3.818	0.173	220

Table 9.

Multiple Linear Regression Analysis for Admissions and End of Program Variables Predicting Outcomes of Internship I Counseling Skills

Variable	*B*	*SE B*	95% CI	*t*	*p-values*	R^2
Constant	2.665	0.804	[1.081, 4.250]	3.316	0.001	0.052
UGPA	0.101	0.060	[-.017, .219]	1.681	0.094	
GREQ	-0.002	0.004	[-.011, .006]	-0.607	0.544	
GREV	-0.003	0.005	[-.012, .006]	-0.662	0.508	

Variable	*B*	*SE B*	95% CI	*t*	*p-values*	R^2
GREW	0.004	0.042	[-.079, .086]	0.085	0.932	
GPA1	0.052	0.103	[-.152, .256]	0.503	0.615	
GPAEP	0.350	0.199	[-.043, .742]	1.757	0.080	

CI = confidence interval for *B*

Research Question 3: Professional Skills and Counseling Skills for Internship II

Did the cognitive admission criteria submitted with a student's application to an online counseling program including their reported undergraduate GPA and scores on their Graduate Record Exam (Verbal, Quantitative, and Writing scores), earned GPA in their first semester (GPA1), and earned final cumulative GPA (GPAEP) predict their end of program student evaluations for Internship II? The purpose of this question in this study was to investigate how well student's GPA, GREV, GREQ, GREW, GPA1, and GPAEP scores predicted their evaluation scores on two criteria at the end of their Internship II course for Professional Skills and Counseling Skills. These were evaluated as separate constructs.

Internship II Professional Skills

A multiple linear regression was calculated to predict Professional Skills in Internship II assessment scores based on UGPA, GREQ, GREV, GREW, GPA1, and GPAEP. The means and standard deviations are reported in Table 10 below. A statistically nonsignificant regression equation was found ($F (6, 207) = .546$, $p < .773$), with an R^2 of .016. This equation represents the combined influence of the independent variables, which accounted for only a 1.6% change in Internship II Professional Skills. The results of this study showed that Professional Skills scores increased .006 for each UGPA point, increased .001 for each GREQ point, increased .000 for

each GREV point, decreased -.020 for each GREW point, increased .058 for each GPA1 point, and increased .047 for each GPAEP point. UGPA, GREQ, GREV, GREW, GPA1, and GPAEP were not significant predictors of Internship II Professional Skills. The p-value for UGPA was 0.854; the p-value for GREQ was 0.551; the p-value for GREV was 0.896; the p-value for GREW was 0.382; the p-value for GPA1 was 0.409; and the p-value for GPAEP was 0.675.

Table 10.

Descriptive Statistics of Internship II Professional Skills

	Mean	Std. Deviation	N
Professional Skills	3.875	0.211	214
UGPA	3.212	0.430	214
GREQ	142.610	7.245	214
GREV	148.570	6.711	214
GREW	3.689	0.734	214
GPA1	3.792	0.277	214
GPAEP	3.811	0.180	214

Table 11.

Multiple Linear Regression Analysis for Admissions and End of Program Variables Predicting Outcomes of Internship II Professional Skills

Variable	*B*	*SE B*	95% CI	*t*	*p-values*	R^2
Constant	3.279	0.445	[2.401, 4.156]	7.367	0.000	0.016
UGPA	0.006	0.035	[-.063, .076]	0.184	0.854	
GREQ	0.001	0.002	[-.003, .006]	0.598	0.551	
GREV	0.000	0.003	[-.005, .005]	0.131	0.896	
GREW	-0.020	0.023	[-.066,	-0.876	0.382	

Variable	*B*	*SE B*	95% CI	*t*	*p-values*	R^2
			.025]			
GPA1	0.058	0.071	[-.081, .198]	0.828	0.409	
GPAEP	0.047	0.112	[-.174, .268]	0.420	0.675	

CI = confidence interval for *B*

Internship II Counseling Skills

A multiple linear regression was calculated to predict Internship II Counseling Skills assessment scores based on UGPA, GREQ, GREV, GREW, GPA1, and GPAEP. The means and standard deviations are reported in Table 12 below. A statistically nonsignificant regression equation was found (F (6, 207) = .552, p < .768), with an R^2 of .016. The results of this study showed that Counseling Skills increased .012 for each UGPA point, increased .002 for each GREQ point, decreased -.001 for each GREV point, decreased -.007 for each GREW point, increased .078 for each GPA1 point, and increased .030 for each GPAEP point. The p-values were all greater than significance at the p<.05 level, and the relationship is not statistically significant. The p-value for UGPA was 0.775; the p-value for GREQ was 0.473; the p-value for GREV was 0.859; the p-value for GREW was 0.792; the p-value for GPA1 was 0.339; and the p-value for GPAEP was 0.819.

Table 12.

Descriptive Statistics of Internship II Counseling Skills

	Mean	Std. Deviation	N
Counseling Skills	3.851	0.244	214
UGPA	3.212	0.430	214
GREQ	142.610	7.245	214
GREV	148.570	6.711	214

	Mean	Std. Deviation	N
GREW	3.689	0.734	214
GPA1	3.792	0.277	214
GPAEP	3.811	0.180	214

Table 13.

Multiple Linear Regression Analysis for Admissions and End of Program Variables Predicting Outcomes of Internship II Counseling Skills

Variable	*B*	*SE B*	95% CI	*t*	*p-values*	R^2
Constant	3.229	0.515	[2.214, 4.245]	6.271	0.000	0.016
UGPA	0.012	0.041	[-.069, .092]	0.286	0.775	
GREQ	0.002	0.003	[-.003, .007]	0.719	0.473	
GREV	-0.001	0.003	[-.006, .005]	-0.177	0.859	
GREW	-0.007	0.027	[-.060, .046]	-0.264	0.792	
GPA1	0.078	0.082	[-.083, .239]	0.959	0.339	
GPAEP	0.030	0.130	[-.226, .285]	0.229	0.819	

CI = confidence interval for *B*

Sex, Age, and Race Analysis

A linear regression was also used to analyze the dependent variables of Professional Skills and Counseling Skills for Practicum, Internship I, and Internship II with students' demographic information. The Professional Skills and Counseling Skills were analyzed independently for each course with the students' sex, age, and race. Gender identification, age,

and race did not significantly influence students' evaluations for either Professional Skills or Counseling Skills for Practicum, Internship I, and Internship II.

Summary

This chapter described analysis results of four research questions that examined the influence of admissions criteria on several outcome variables. Numerous studies (Kuncel et al., 2001; Kuncel et al., 2007; Kuncel et al., 2010) have considered standardized tests and their ability to predict a graduate student's academic success. Overall, standardized tests and undergraduate GPA were good predictors of a student's academic success viewed in terms of overall GPA or first year grade point averages. However, studies have not considered how these standardized tests and academic measures such as first semester GPA and end of program overall GPA predict performance outcomes in graduate programs with a clinical component. Results of this study found that the academic admission measures of UGPA, GREQ, GREV, GREW, GPA1, and GPAEP were not good at predicting clinical performance outcomes. However, a follow-up stepwise regression analysis found that end of program GPA scores were significant predictors of Counseling Skills for Practicum, significant predictors of both Professional Skills and Counseling Skills for Internship I, but not predictive for either Professional Skills or Counseling Skills for Internship II.

Chapter Five presents the implications of these findings.

Chapter 5: Summary

Although much has been written about the subject of admission at all levels of the university—undergraduate, graduate, doctoral, and professional—there is little research to support the relationship between admission criteria and the clinical work of students (McCaughan & Hill, 2014; Swank & Smith-Adcock, 2014). This research sought to determine if admissions policies were adequate in identifying those applicants who would be successful both academically and clinically.

Astin's I-E-O theory of assessment was one of the theoretical frameworks to guide this research project (Astin & Antonio, 2012; York, Gibson & Rankin, 2015). The I-E-O model explains how the process of admission, selection, institutional training, and finally performance output completes the educational cycle for the student. The success of this process is then measured through the student's final evaluations in a fieldwork experience where skills learned throughout the program are applied to actual clinical work. This model thus exemplified the process used for this research.

The problem for those identifying candidates for admission to a graduate degree in counseling and school counseling is to select those individuals who will develop the personal qualities required of professional counselors (McCaughan & Hill, 2014). This is especially true for online students who complete their degree remotely and who do not have ongoing face-to-face interactions with their course instructors throughout the program. The online program faculty rely on the substantive evaluations of the site supervisors who see the students on a regular basis throughout their clinical experience including Practicum, Internship I, and Internship II for a sense of student progress. It is therefore important for those reviewing applicant files and selecting individuals for admission to be confident that those they are

admitting have the capacity to fulfill the requirements of a graduate degree program and then to succeed as practitioners in the field.

In addition, students completed almost all of their academic courses prior to beginning their fieldwork. Each of the program courses is background and provides the knowledge and understanding of the concepts of counseling, developmental issues, abnormal behaviors, and understanding all related to the knowledge needed to perform on-site.

Based upon ethical codes and training standards for counseling (ACA, 2014), educators see the supervision of their students as a gatekeeping and important function in the training of future counselors. Student behaviors that are considered deficient, unsatisfactory, or inadequate while working in the clinical field are identified by the site supervisor (Swank & Smith-Adcock, 2014). The use of student ratings by site supervisors is then one of the criteria used for identifying problematic student behaviors by those overseeing the gatekeeping function of the program.

The purpose of this quantitative ex post facto convenience study was to examine if there was the existence of a relationship between traditional academic admission criteria and end of program clinical evaluation scores. This research explored the statistical relationship between the admission criteria for online students enrolled in a graduate level degree in counseling and school counseling from 2010 to 2018 and their clinical evaluation scores in three end of program courses: Practicum, Internship I, and Internship II. Two constructs of the clinical evaluations were used in this study: (1) Students' Professional Skills and (2) Students' Counseling Skills. Students who submitted a complete set of clinical evaluations for Practicum (n = 220) were included in Question 1. Students who submitted a complete set of clinical evaluations for

Internship I (n = 220) were included in Question 2, and students who submitted a complete set of evaluations for Internship II (n = 214) were included in Question 3.

Study findings indicated that the independent variables (UGPA, GREQ, GREV, GREW, GPA1, GPAEP) did not influence students' performance for Professional Skills or Counseling Skills in any of the three courses used in this study: Practicum, Internship I, and Internship II. Overall admission was not significant in any of the regression models in end of program clinical evaluations for Practicum, Internship I, and Internship II; therefore, the null hypothesis was rejected. There was no relationship between admission and end of program clinical evaluations for the three end of program clinical courses. Results showed that in addition to the admission criteria of UGPA and GRE scores, there was no relationship between the grades a student earned in the first semester of their master's degree and their final overall cumulative GPA and end of program clinical evaluations for Practicum, Internship I, and Internship II.

A subsequent statistical analysis using a stepwise linear regression model did produce slightly different results. The findings of this exploratory study using stepwise regression analysis showed that only GPAEP was statistically significant in influencing end of program clinical evaluations for Counseling Skills in Practicum and Professional and Counseling Skills for Internship I.

The stepwise linear regression also showed that neither UGPA, GREQ, nor GREV significantly influenced students' GPA1. A statistically significant regression was found for students' GPA1 with GREW and UGPA. Findings also showed that GREW and GREQ were statistically significant predictors of GPAEP. These findings are consistent with the literature reporting that results are mixed in predicting academic success in college based upon previous academic work and performance (Kuncel et al., 2001; Kuncel & Hezlett, 2007; Kuncel et al.,

2014; York et al., 2015). GREW may have had an impact on GPA1 in this study because of the nature of the online program where the focus of the online delivery is written communication.

Results also showed little variation in scores for first semester GPA, and final evaluation scores were closely dispersed without much variability within this sample of students (Hinkle et al., 2003). A visual observation of the raw data for evaluation scores for each of the constructs—Professional Skills and Counseling Skills—showed a consistent set of scoring, with mostly four ratings for each of the items within each of the constructs.

One possible explanation for the lack of variation in the raw data may be that site supervisors in this program of study did not receive formal training as site supervisors. Research on clinical supervision overwhelmingly supports a formal training process for the site supervisor. This is to ensure that they have not only the professional competence to provide the necessary professional guidance and support to those students they are supervising, but also good skills as mentors to their supervisees (Borders, Bernard & Goodyear, 2014; Borders et al., 2014; Merlin & Brendal, 2017). In a review of site supervisors, Gareis and Grant (2014) found that the majority had not received any formalized training. Although called for in the literature, this program did not institute formalized training for their site supervisors. This could possibly be one of the reasons for the lack of variability across individual scores. Another reason is that site supervisors were not paid for their work and may not have exerted any extra attention to each of the items on the evaluation form. The site supervisor may determine that if a student under their direction is doing well, has the ability to learn, and can assist with the tasks assigned then they have met the criteria for a score of 3 or 4. While these are important factors to consider and may influence future research questions, the clinical evaluations remain a core element of student evaluation.

Research Conclusions

The findings of this exploratory study using multiple linear regression analysis showed that the independent variables of UGPA, GPA1, GREQ, GREV, and GREW were not statistically significant for Question One (Practicum), Question Two (Internship I), or Question Three (Internship II) for either Professional Skills or Counseling Skills. These findings support the research that traditional admission criteria may not identify students in the selection process who may be successful students clinically (Stemler, 2012; Sternberg, 2010). An early study by authors Hosford, Johnson, and Atkinson (1984) looking at standardized test scores and counselor success identified through faculty evaluations of students enrolled in a counselor preparation program found that neither counselor competency or future could be predicted by scores on a standardized test.

These findings also raise the question as to why final grades in a student's first semester (GPA1) or their cumulative GPA (GPAEP) at the end of the semester would not be related to their end of program clinical evaluations. The online program had adopted several stopgap measures to identify students who were admitted to the master's degree programs but who were unable to maintain an overall 3.0 GPA, the minimum overall GPA standard policy set by the university. Remediation policies during the first two semesters of the student's participation in these programs screened for those students who had earned below a B. This grade carries a weight of 3.0 points in the calculation of a student's overall GPA. If a student earned below a B in the first semester, they were then required to retake the course and given the opportunity to raise their final grade to the minimum B required to continue in the program. Most students who earned below a B were able to raise their grade to at least a B and on a student's official transcript the lower grade was replaced with the higher grade; therefore, only those students with at least an overall GPA of 3.0 continued toward degree completion. This then standardized

students' grades for those who continued in the program, and would also contribute to the lack of variability in the results reported for GPA1.

Findings and Demographic Information

Historically, data analysis of the ratio of female to male students admitted to institutions of higher education reveal that the number of females admitted is higher than the number of males (Conger & Dickson, 2017). Similar results were found in this study, with the female number of graduates at 85% and the male number of graduates at 15%. However, the research shows mixed results in terms of gender admission and retention. Factors such as family considerations may be more strongly deliberated by females when applying to college and pursuing advanced degrees, while men may focus more on obtaining a degree and then beginning work (Lörz & Mühleck, 2019).

The studies that consider graduation rates and underrepresented populations have focused more on issues of course design and instructor participation as they relate to course and degree completion (King-Spezzo & Hsiao, 2020). Overall, males and females shared similar beliefs in terms of their expectations for an effective online course setting. Differences between white and black students in terms of their expectations for student involvement revealed that white students expected greater teacher support than black students, and that an understanding of student needs by instructors would result in better course outcomes.

Few studies have looked comprehensively at the graduation rates from graduate school based on race, ethnicity, and gender. One such study done by Akabas and Brass (2019) looked at outcomes based on race, ethnicity, and gender for students enrolled in MD-PhD programs. This study found that regardless of sex, race, or ethnicity the vast majority of those who were admitted to this degree program did complete it. Further, the demographic breakdowns for sex in this profession showed an increase in women applying to and completing the MD-PhD

programs, but overall more males than females were enrolled. This is also true for race where more whites than other races apply to and complete this degree. These authors noted that one of the profession's objectives is to increase the diversity of those who pursue and complete the MD-PhD program.

An interesting area for future research on increasing the completion rates of underserved populations is research on the role of social capital in terms of social networks and relationship building to provide support to students, which reduces the feeling of isolation such students might experience in the higher education environment (Mishra, 2020). The fact that the learning model experienced by the online student in this study was a cohort and learning team model may have contributed to the fact that student evaluations were not impacted by race, sex, or ethnicity. A future study considering the impact of this model and if and to what extent it positively impacted students' feelings of having a support system and belonging to the university and the program would be an area to pursue in future studies.

The findings contribute to this body of information in supporting the theory that relying singularly on an applicant's academic background for selection of those who will be successful counselors is not proven in this study. These findings then add another piece of information to previous research done on the relationship between admission criteria and application of the curriculum material to fieldwork experiences and the evaluation of students (Kuncel et al., 2001; Kuncel & Hezlett, 2007; Kuncel et al., 2014; York et al., 2015).

Limitations

Results of this study show that admission criteria data is negligible in identifying those who will be successful in their clinical evaluations. One limitation of the study is that prospective applicants who do not have the minimum admission criteria as stated in university manuals may have self-selected themselves out of the applicant pool. The sample may have excluded a

potential group of students with lower than published accepted minimum scores or UGPA. This is also true of those students who did not meet the minimum academic requirements to remain in the program. These students may have been dismissed or self-withdrew, and were not included in the study results (English & Umbach, 2016).

A look back at the number of students who withdrew from either the MA Counseling or MA School Counseling since 2015 to 2019 is 67. Fifteen of these students withdrew after the first semester after earning 6 credits and another 9 stopped the program after earning between 9 and 12 credits. Therefore, 15 students withdrew after earning 12 or fewer credits and relatively early in their degree program. The approximate number of students who started this program during the same time period was approximately 300. This is about a 22 percent withdrawal rate. The weaker academic student is unlikely to succeed academically and continue to the point in the program where they would have begun their clinical work. The gatekeeping function of faculty then identified certain students who were deemed to be deficient as counselors, and either faculty recommended they withdraw or the student self-selected out of the master's degree. A critical function of the profession of counseling training programs is to gate-keep and to identify those who may be deficient in the profession (Gaubatz & Vera, 2006).

A presumption is then that students who make it to their clinical site placements have received the training necessary to begin their placement (Dean et al., 2018). A limitation of the clinical evaluations could have been the lack of critical review by site supervisors. Site supervisors who view their supervisees as meeting the minimum requirements for a trainee may not review them critically. A lack of variability in the evaluations may have led to these results. Students were evaluated based on a scale from 1 to 4, where 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, and 4 = Strongly Agree. Student grades were reported from A with a

weight of 4.0 to C with a weight of 2.0. Supervisor training as to expectations about performance or how to evaluate critically not defined by program faculty did not create a structure to follow for each construct (Dean et al., 2018; Kangos et al., 2018).

Associated with this is perhaps the fact that those students who started Practicum and were viewed as not acceptable for the field may have been dismissed or withdrew from the program at that point in the semester. These numbers would be negligible, since most of the online students would have been identified and remediated at several points in the program as not suited to the profession. In the past year, three students self-selected out just before the start of their clinical sequence to complete their master's degree in another area. This study did not account for individual factors that could have contributed to a student's success such as personal motivation, need to earn an advanced degree for career advancement, increases in salary, promotions, or lifestyle changes (Goodman et al., 2016, 2019; Sogunro, 2015; Wyatt, 2011). More information about the personal qualities of the applicant that may be deciphered through interviews or personal statements may provide more insight into how well a student may eventually do in their graduate education (Walpole et al., 2002).

Conversely, a strength of this study was the historical data available for the program and the almost 10-year look back over the relationship between admission and outcomes. This historical look back to see if there was a relationship between admission criteria and outcomes included a robust number of cases included in the data analysis.

Implications for Admissions and Recommendations for Future Research

This study has important implications for the future study of admission criteria and policies created for those students with a performance-based portion of their degree program. The elimination of standardized testing criteria for admission is now proposed and beginning to be more widely adopted by undergraduate and graduate programs alike (Belasco et al., 2015;

Sternberg et al., 2012). This approach is considered one avenue to increase access for a larger and more diverse population of applicants, leading to a more diverse student population (Mattern & Allen, 2016). Given the potential economic impact of advancing educationally by attaining a graduate degree, opening up the criteria for admission gives more opportunity to a large group of people to advance in their careers, contribute to overall economic growth for them personally and their families, and make contributions to their overall member society (Becker, 1962, 1974, 2002; Bowman & Bastedo, 2018). The use of standardized tests may not be essential for admission to a graduate program that includes an application of learning as part of the instruction. This approach would then allow for less focus on their standardized test score and a greater focus on the non-academic aspects of their application. The elimination of the standardized test would then allow for a more diverse pool of student applicants to be admitted (Roberts & Ostreko, 2018).

One source to be considered in future research is the recommendations submitted by the applicant. A stronger reliance on the recommendations could be reflected in future research on admission. Authors Hall, O'Connell, and Cook (2017) researched the relationship between GRE scores and academic success (which they measured as number of publications for graduate students in a Biomedical program), and found that GRE scores were ineffective in predicting their students' academic success. Better predictors of academic success used in admission were the letters of recommendation submitted by the applicant. Hall et al. recommend that admissions committee members begin to use a more holistic approach when evaluating applicants. A holistic approach to admissions is also supported by the Council of Graduate Students, which suggests that this approach lends itself to a fairer analysis of applicants and creates opportunities to open up admission to a diverse set of applicants (Kent & McCarthy, 2016).

Other research might evaluate recommendations by using the scores given by the recommender on the candidate. This would be a quantitative study to evaluate the statistical significance between the Likert-type measures on the recommendations and a student's UGPA, GPA1, and UGPAEP. A qualitative study could also be done to look at the written section of the evaluation to see if themes developed for those students who completed the degree. Future research could include an exploratory study that considered students who withdrew or were dismissed and their admission file with UGPA, semester grades, and overall GPA.

The increased focus on non-cognitive measures in admission and the use of the interview as a tool in the selection process has shown positive outcomes. The use of interviews in admission has been viewed as a positive criterion to identify those admitted students who will do well academically in their first semester of college, retaining them and identifying those who possess internal motivational characteristics (Makransky et al., 2017).

At the forefront of research on this topic are those responsible for identifying applicants for admission to medical school, who have been on the cutting edge of research on using the interview in the admission process (Apple, 2017; Kelly et al., 2018). Those applying to medical school represent a highly selective group of applicants, the interview is one method that may enhance the ability of those in admission to differentiate and select the best among them. The inclusion of the interview has been found to allow for those non-cognitive features such as emotional intelligence and situational judgment, professionalism, and control in a crisis situation. Overall the addition of the interview has been found to be reliable and valid in differentiating those who will show characteristics viewed as compatible with the medical profession from those who do not possess these non-cognitive characteristics (Apple, 2017). These studies used the Multiple Mini-Interviews (MMIs), in which applicants work through a series of brief, semi-

structured assessment stations, each attended by a different trained rater (Jerant et al., 2017) rather than a non-structured interviewed. Overall, the use of a structured interview shows positive results in identifying and separating those who will be successful.

It may also be interesting to duplicate this study by separating school counseling majors from counseling majors to see if the results are replicated. This type of study could also consider differences in admission criteria and applicant undergraduate GPA, and possibly expanding the study to view the undergraduate institution. There may be slight differences in these criteria that would assist with the admission decision to gain greater numbers of students who successfully complete their clinical training and their degree.

Conclusion

The purpose of this study was exploratory in nature. A quantitative study was used to determine if academic admission criteria of UGPA and GRE scores on Quantitative, Verbal, and Writing skills are statistically significant to end of program clinical evaluations for Practicum, Internship I, and Internship II courses in two online master's degree programs, counseling and school counseling. Although admission is considered an important element of higher education and has been studied extensively at the undergraduate level, few studies have looked at the graduate student. This study was an attempt to add to the literature and to the understanding of admission as it relates to behavioral outcomes. Institutions of higher education rely heavily on academic measures of success in their admissions policies. Yet, few studies have measured student success in terms of a behavioral assessment. In addition, as we continue to strive to ensure that educational opportunities are available to all people, it is important to understand the possible barriers to advanced education.

These results were not disappointing but interesting in that they confirmed the thesis and the belief that success as a counselor is not dependent upon academic admission criteria.

However, it is still necessary for a graduate student to be able to complete the academic portion of the program and the academic courses where training, learning ethical standards, laws, understanding research, and theory are also important features of the overall training. These findings also lend support to the concept of open admissions policies that do not rely on previous academic criteria. Admissions committees could rely more on the student's recommendations and an interview to gain insights into the personal and emotional well-being of individuals applying to the master's degree program. In effect this would give applicants the opportunity to succeed where students are admitted regardless of their undergraduate GPA or standardized test scores.

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Appendix A

Site Supervisor's Field Placement Evaluation for Students Enrolled MA Counseling Degree

Student's Name_____Date_____

Site Location_____Site Supervisor_____

_____Practicum Internship _____I ____II ____III _____Semester (indicate which)

I. STUDENT PROGRESS

In what areas has this trainee shown strengths?

In what areas has this trainee showed improvement?

In what areas (populations, sites, skills, issues) would this trainee be most effective?

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1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree N/A Not Applicable
A score of 3 means the student is functioning at the <u>expected level</u>

II. STUDENT'S PROFESSIONAL SKILLS

1. Accepts supervisor's feedback	1	2	3	4	n/a
2. Maintains client confidentiality	1	2	3	4	n/a
3. Practices ethical behavior	1	2	3	4	n/a
4. Maintains appropriate case notes and records	1	2	3	4	n/a
5. Implements goals and policies of the site	1	2	3	4	n/a
6. Identifies own strengths and weaknesses	1	2	3	4	n/a
7. Works effectively with other professionals	1	2	3	4	n/a

III. STUDENT'S COUNSELING SKILLS

1. Responds appropriately to client	1	2	3	4	n/a
2. Establishes rapport	1	2	3	4	n/a
3. Is sensitive to individual differences	1	2	3	4	n/a

4. Reflects client's feelings	1	2	3	4	n/a
5. Listens effectively	1	2	3	4	n/a
6. Helps client establish appropriate goals	1	2	3	4	n/a
7. Uses effective interventions consistent with theoretical orientation	1	2	3	4	n/a

IV-A. SCHOOL COUNSELING ONLY

N/A

IV-B. MENTAL HEALTH COUNSELING ONLY

1. Conducts intakes and discharges effectively	1	2	3	4	n/a
2. Conceptualizes cases using effective diagnosis and treatment planning.	1	2	3	4	n/a
3. Integrates new session information into ongoing treatment planning.	1	2	3	4	n/a
4. Works effectively with a range of client problems	1	2	3	4	n/a
5. Addresses and corrects clinical errors.	1	2	3	4	n/a
6. Balances responsibilities e.g. sessions, appointments, record-keeping, treatment plans, supervision, and unexpected events	1	2	3	4	n/a

Recommended site grade: _____

Your Signature _____ Date_____

Your Supervisee's Signature _____ Date _____

This evaluation was adapted from www.appic.org – VA Chicago Health Care System Assessment of Trainee.

Appendix B

Site Supervisor's Field Placement Evaluation for Students Enrolled in MA School Counseling Degree

Student's Name_____Date_____

Site Location_____Site Supervisor_____

_____Practicum Internship _____I ____II ____III _____Semester (indicate which)

I. STUDENT PROGRESS

In what areas has this trainee shown strengths?

In what areas has this trainee showed improvement?

In what areas (populations, sites, skills, issues) would this trainee be most effective?

---

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree N/A Not Applicable
A score of 3 means the student is functioning at the <u>expected level</u>

II. STUDENT'S PROFESSIONAL SKILLS

1. Accepts supervisor's feedback	1	2	3	4	n/a
2. Maintains client confidentiality	1	2	3	4	n/a
3. Practices ethical behavior	1	2	3	4	n/a
4. Maintains appropriate case notes and records	1	2	3	4	n/a
5. Implements goals and policies of the site	1	2	3	4	n/a
6. Identifies own strengths and weaknesses	1	2	3	4	n/a
7. Works effectively with other professionals	1	2	3	4	n/a

III. STUDENT'S COUNSELING SKILLS

1. Responds appropriately to client	1	2	3	4	n/a
2. Establishes rapport	1	2	3	4	n/a

3. Is sensitive to individual differences	1	2	3	4	n/a
4. Reflects client's feelings	1	2	3	4	n/a
5. Listens effectively	1	2	3	4	n/a
6. Helps client establish appropriate goals	1	2	3	4	n/a
7. Uses effective interventions consistent with theoretical orientation	1	2	3	4	n/a

IV-A. SCHOOL COUNSELING ONLY

1.Works effectively in the school setting	1	2	3	4	n/a
2.Addresses students' academic, personal, and career needs appropriately.	1	2	3	4	n/a
3.Collaborates and consults with teachers	1	2	3	4	n/a
4.Addresses developmental needs of students appropriately at this school level (e.g. college planning, behavior, peers, academic skills)	1	2	3	4	n/a
5. Consults effectively with parents	1	2	3	4	n/a

IV-B. MENTAL HEALTH COUNSELING ONLY

1. Conducts intakes and discharges effectively	1	2	3	4	n/a
2. Conceptualizes cases using effective diagnosis and treatment planning.	1	2	3	4	n/a
3. Integrates new session information into ongoing treatment planning.	1	2	3	4	n/a
4. Works effectively with a range of client problems	1	2	3	4	n/a
5. Addresses and corrects clinical errors.	1	2	3	4	n/a
6. Balances responsibilities e.g. sessions, appointments, record-keeping, treatment plans, supervision, and unexpected events	1	2	3	4	n/a

Your comments:

Recommended site grade: _____

Your Signature _____ Date_____

Your Supervisee's Signature _____ Date _____

Thank you!

Appendix C

GRE General Test Interpretive Data

GRE

GRE® General Test Interpretive Data

To help interpret scaled scores, the GRE Program describes scores in terms of their standing in appropriate reference groups. Table 1A provides summary statistics for this reference group for each of the three GRE General Test measures: means and standard deviations of scaled scores, and number of test takers. The table is based on all individuals who tested between July 1, 2014, and June 30, 2017. Test takers who received a No Score (NS) on a specific measure are excluded from the data reported in that specific measure's accompanying tables.

Although each GRE General Test measure assesses different developed abilities, scores on the measures are moderately related. The correlation between Verbal Reasoning and Quantitative Reasoning scores is.35, the correlation between Verbal Reasoning and Analytical Writing scores is.68, and the correlation between Quantitative Reasoning and Analytical Writing scores is.16.

Table 1A: Performance Statistics on the *GRE*® General Test
(Based on the performance of all individuals who tested between July 1, 2014, and June 30, 2017)

Test	Number of Test Takers	Mean	Standard Deviation
Verbal Reasoning Measure	1,727,225	150.05	8.43
Quantitative Reasoning Measure	1,730,288	152.80	9.13
Analytical Writing Measure	1,722,231	3.50	0.87

Note: A total of 52 percent of test takers indicated they were female, 46 percent indicated they were male, and 2 percent did not provide any classification with regard to gender.

Tables 1B and 1C provide percentile ranks (i.e., the percentages of test takers in a group who obtained scores lower than a specified score) for the GRE General Test measures. The tables are based on all individuals who tested between July 1, 2014, and June 30, 2017.

Table 1B: *GRE*® Verbal Reasoning and Quantitative Reasoning Interpretative Data Used on Score Reports
(Percent of test takers scoring lower than selected scaled scores. Based on the performance of all individuals who tested between July 1, 2014, and June 30, 2017[a])

Scaled Score	Verbal Reasoning	Quantitative Reasoning
170	99	96
169	99	96
168	98	94
167	98	91
166	97	90
165	96	88
164	94	86
163	93	83
162	91	80
161	88	77
160	86	74
159	83	72
158	80	68
157	76	65
156	73	61
155	69	58
154	65	54
153	61	50
152	56	46
151	52	42
150	47	38
149	42	34
148	38	30
147	34	26
146	31	23
145	27	20
144	23	16
143	20	14
142	17	12
141	14	10
140	11	8
139	9	6
138	8	4
137	6	3
136	4	2
135	3	2
134	2	1
133	2	1
132	1	1
131	1	1
130	1	1

Table 1C: *GRE*® Analytical Writing Interpretative Data Used on Score Reports
(Percent of test takers scoring lower than selected score. Based on the performance of all individuals who tested between July 1, 2014, and June 30, 2017[a])

Score Levels	Analytical Writing
6.0	99
5.5	98
5.0	92
4.5	82
4.0	59
3.5	41
3.0	17
2.5	7
2.0	2
1.5	1
1.0	1
0.5	1
0.0	1

[a]A total of 1,727,225 test takers took the Verbal Reasoning measure, 1,730,288 took the Quantitative Reasoning measure, and 1,722,231 took the Analytical Writing measure between July 1, 2014, and June 30, 2017.

Appendix D

Verbal and Quantitative Reasoning

Verbal Reasoning Concordance Table – Old GRE to New GRE Score Conversion:

Prior Scale	Current Scale	% Rank
800	170	99
790	170	99
780	170	99
770	170	99
760	170	99
750	169	99
740	169	99
730	168	98
720	168	98
710	167	97
700	166	96
690	165	95
680	165	95
670	164	94
660	164	94
650	163	92
640	162	90
630	162	90
620	161	87
610	160	85
600	160	85
590	159	81
580	158	79
570	158	79
560	157	74
550	156	71
540	156	71
530	155	67
520	154	63
510	154	63
500	153	59
490	152	54
480	152	54
470	151	50
460	151	50

Prior Scale	Current Scale	% Rank
450	150	45
440	149	41
430	149	41
420	148	37
410	147	33
400	146	29
390	146	29
380	145	25
370	144	22
360	143	18
350	143	18
340	142	16
330	141	13
320	140	10
310	139	8
300	138	7
290	137	5
280	135	3
270	134	2
260	133	1
250	132	1
240	131	1
230	130	
220	130	
210	130	
200	130	

Quantitative Reasoning Concordance Table

Prior Scale	Current Scale	% Rank
800	166	92
790	164	88
780	163	86
770	161	80
760	160	78
750	159	75
740	158	71
730	157	68
720	156	64
710	155	60
700	155	60
690	154	56
680	153	52
670	152	48
660	152	48
650	151	45
640	151	45
630	150	40
620	149	37
610	149	37
600	148	32
590	148	32
580	147	28
570	147	28
560	146	25
550	146	25
540	145	21
530	145	21
520	144	18
510	144	18
500	144	18
490	143	15
480	143	15
470	142	12
460	142	12
450	141	10
440	141	10
430	141	10

Prior Scale	Current Scale	% Rank
420	140	8
410	140	8
400	140	8
390	139	6
380	139	6
370	138	4
360	138	4
350	138	4
340	137	3
330	137	3
320	136	2
310	136	2
300	136	2
290	135	2
280	135	2
270	134	1
260	134	1
250	133	1
240	133	1
230	132	
220	132	
210	131	
200	131	